

Comparisons of Methods Applied to Data from Twelve Radiosonde Stations

prepared by

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SUMMARY OF CHANGE-POINT AND TIME SERIES RESULTS PREPARED

Stn. No.	Name	Time Series Plotted for These Pressure Levels	Observation Times For Which Groups Provided Change-Point Data						
			CARDS	DP	LKG	SODEN	TAMU		
02836	Sodankyla	500, 100	99	99	none found	99	99		
23418	Pechora	400, 100	99		00 12		99		
43003	Bombay	700, 100		99	00 12		99		
45004	Hong Kong	500, 50	00 99	99	00 12	99	99		
52681	Minqin	500, 100	99		00 12		99		
61052	Niamey	850			99	99			
72775	Great Falls	300, 20	99	99	none found		99		
91334	Truk	500, 50	99	99	00		99		
91376	Majuro	50		99	none found				
93844	Invercargill	1000, 50		99	00 12		99		
94120	Darwin	200		99	00	99	99		
94672	Adelaide	200, 50		99	00 12	99	99		

CARDS - Comprehensive Aerological Research Data Set - Bert Eskridge (NOAA/NCDC) and Jim Luers (U. Dayton)

DP - David Parker and Margaret Gordon (Hadley Centre, UKMO)

LKG - John Lanzante, Steve Klein (both at NOAA/GFDL), and Dian Gaffen (NOAA/ARL)

TAMU - Steve Schroeder (Texas A&M)

SODEN - Brian Soden (NOAA/GFDL)

Interpreting Change-Point Comparison Plots

Triangles indicate timing, location, and magnitude of adjustment.

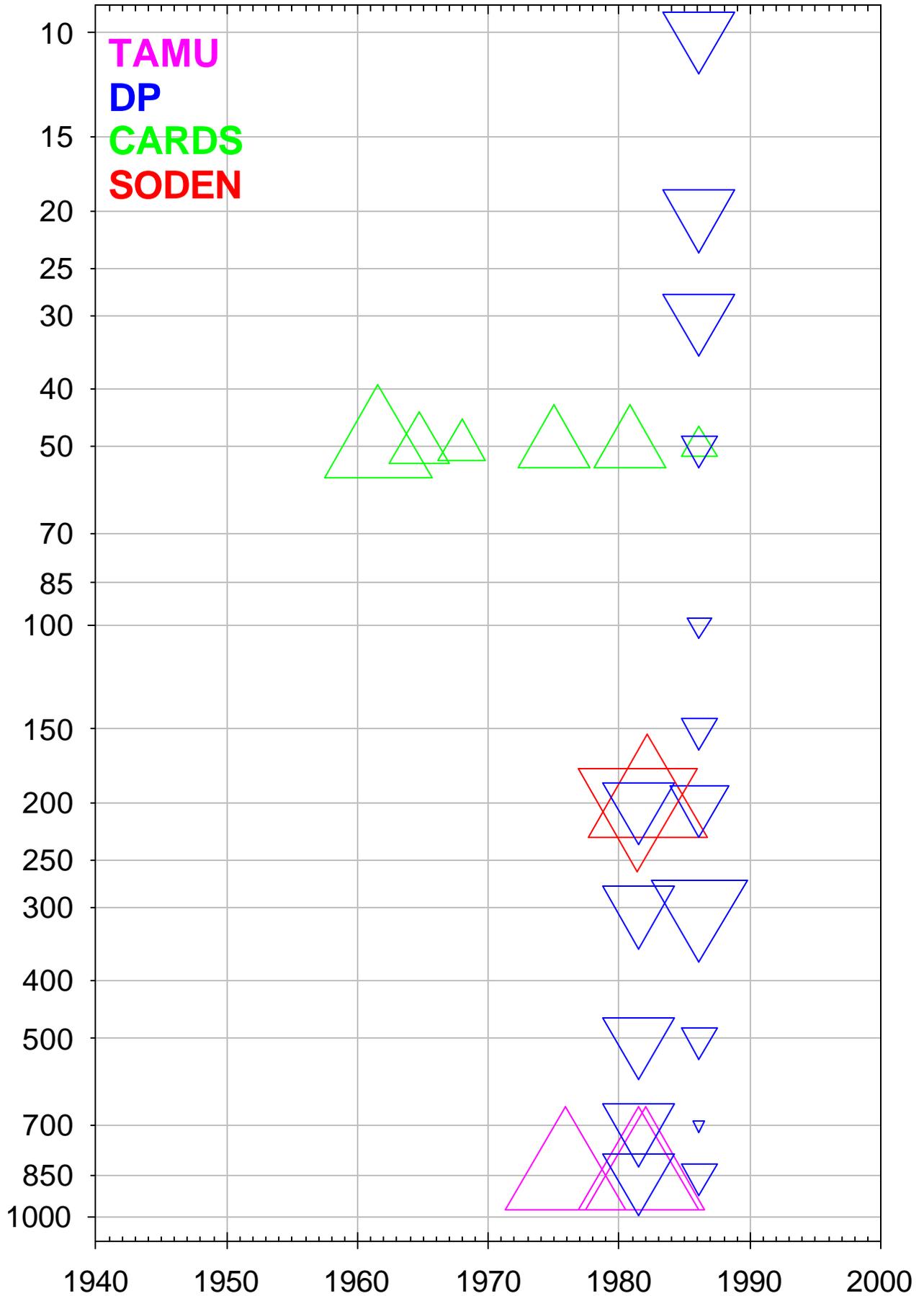
- **Timing:** Apex and centerline are plotted at the change-point date
- **Location:** Center of triangle is plotted at the pressure level of the change-point
- **Magnitude:** Area of triangle is proportional to the jump size. Triangles with apex pointing upward show upward jumps (positive adjustment of data to the 'left' side of the change-point), those with apex pointing downward show downward jumps.

Exceptions:

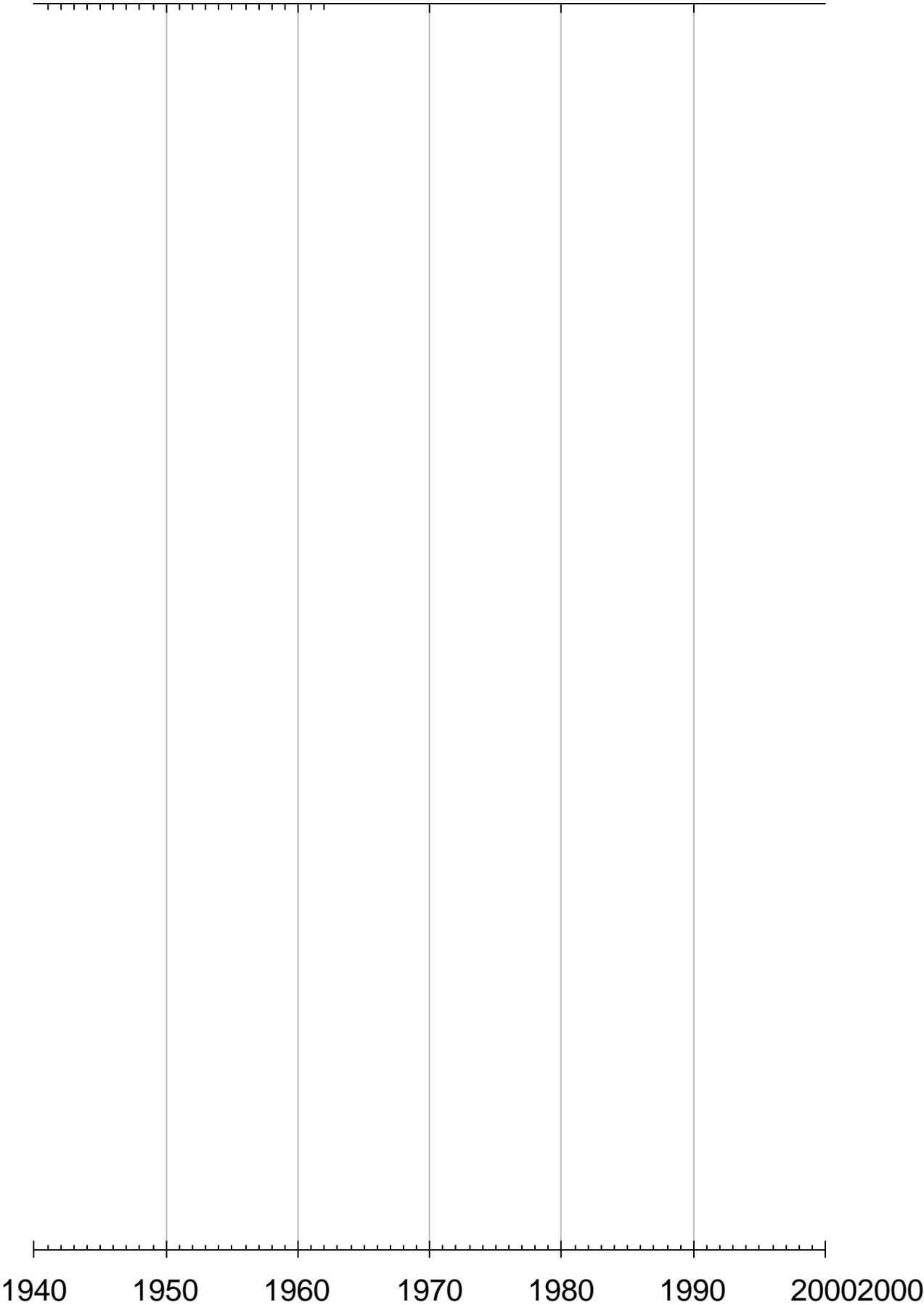
- **TAMU** - Precipitable water data are used to determine timing of change-points in humidity, so sign and magnitude of temperature change-points are not determined. Triangles are plotted upward, at the 850 hPa level, and with magnitude 1 degree C. This allows TAMU results to be used as a scale for all other results.
- **SODEN** - Upper-tropospheric humidity (UTH) data are used to determine timing and sign of change-point in humidity. Triangles are plotted at the 200 hPa level, with magnitude 1 degree C, and sign is that of the shift in UTH.

Caveat: These are preliminary results, pulled together relatively quickly. Please forgive any mistakes made in plotting your data.

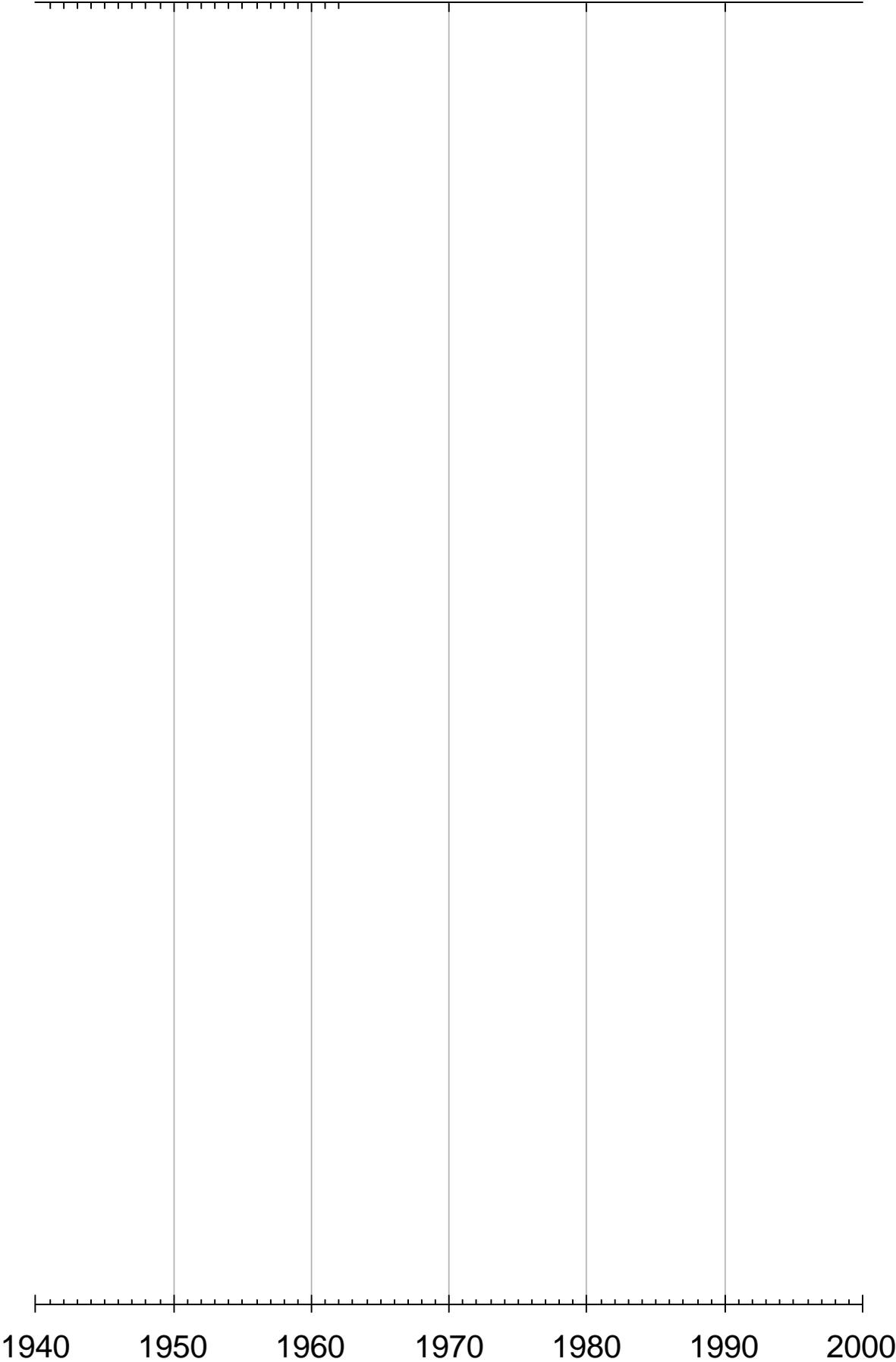
02836 Sodankyla 99Z



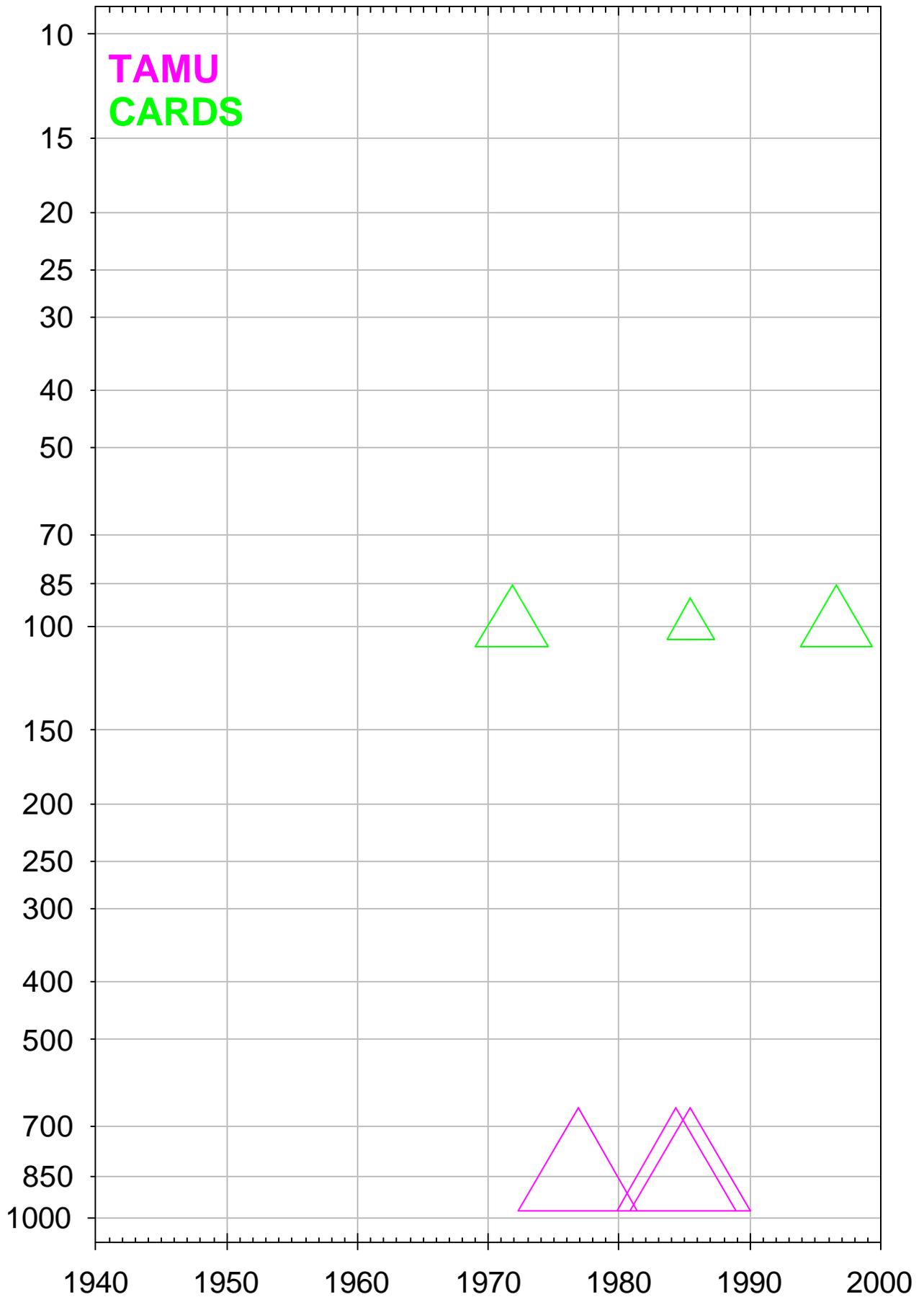
23418 Pechora 00Z



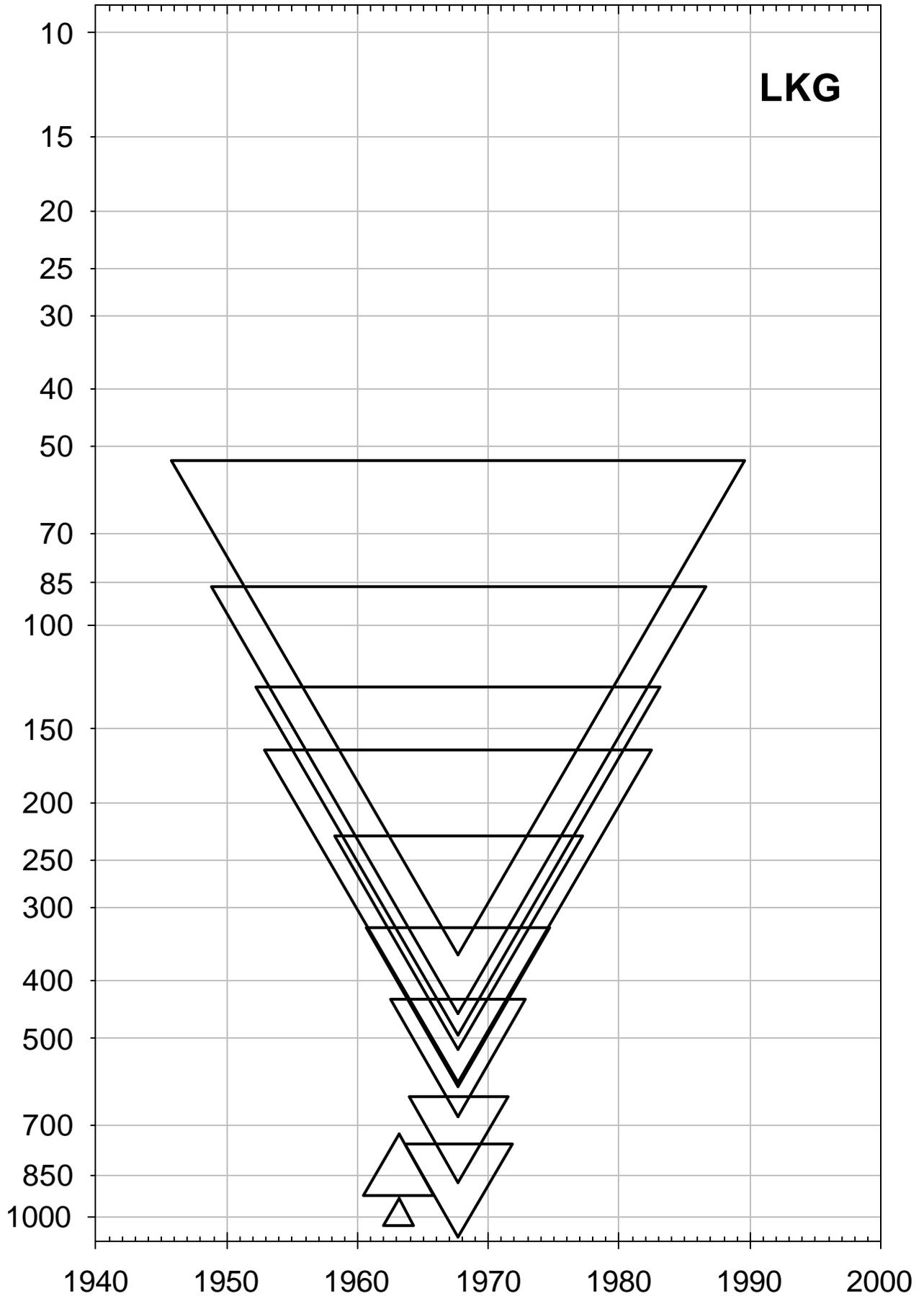
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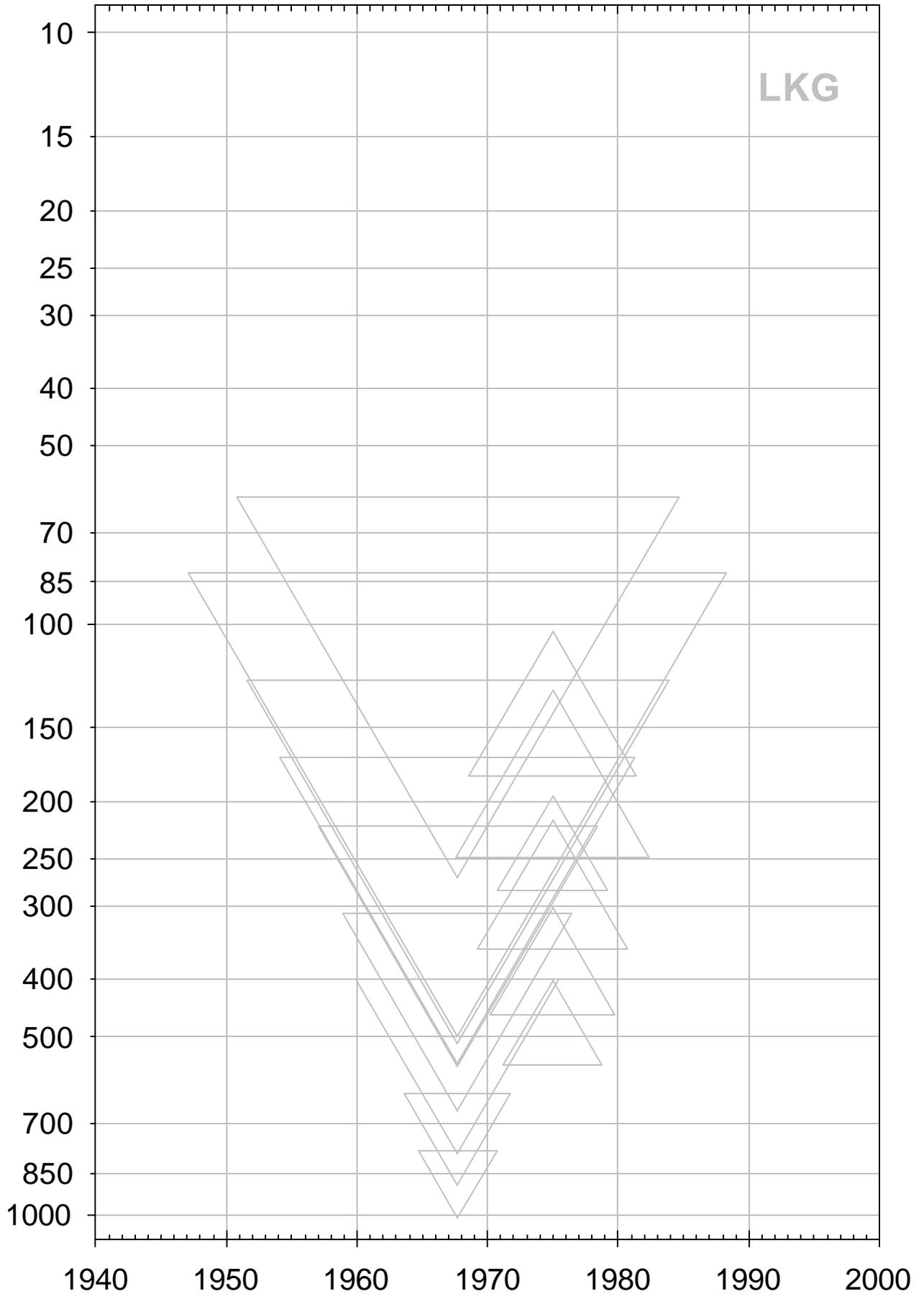
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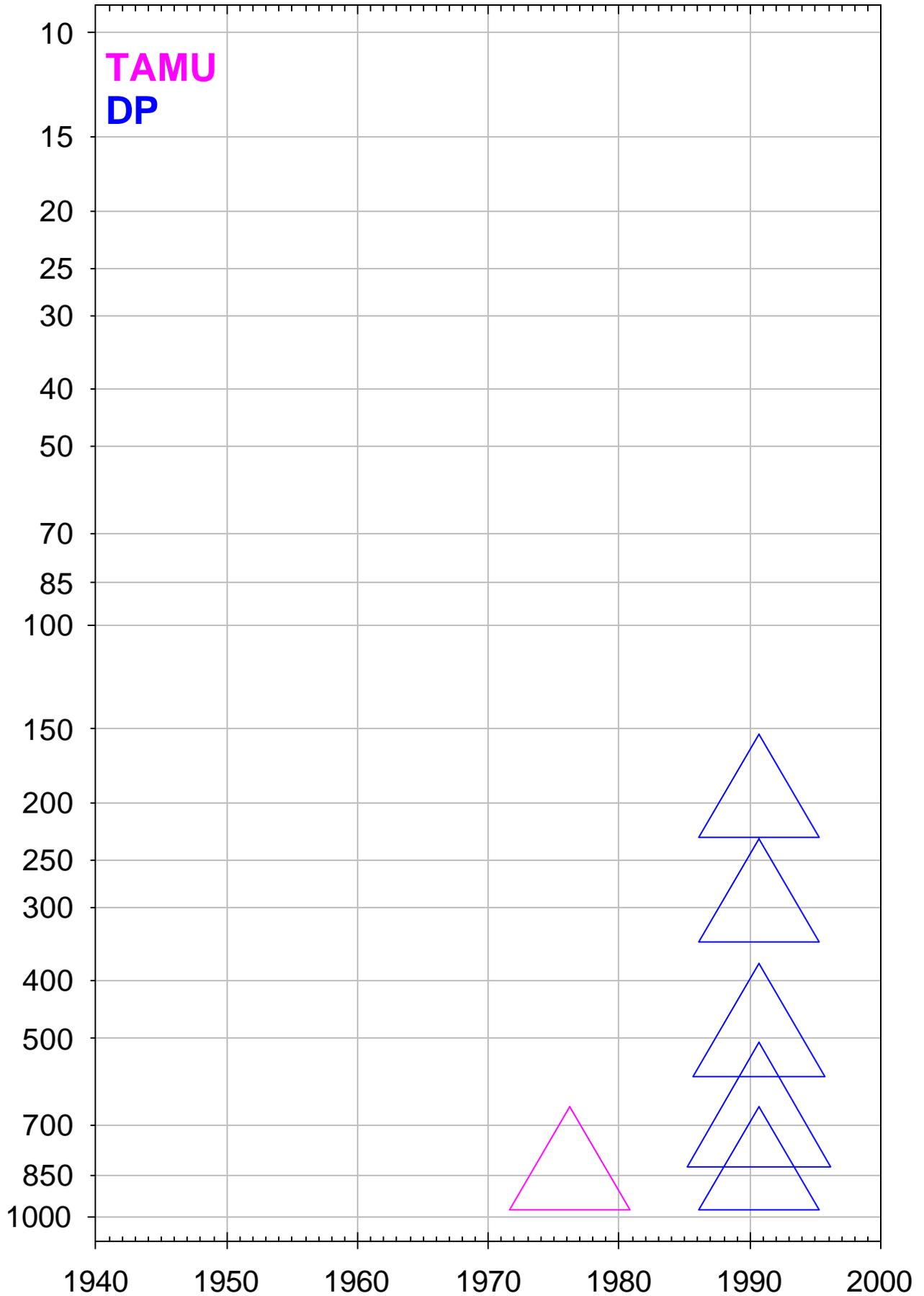
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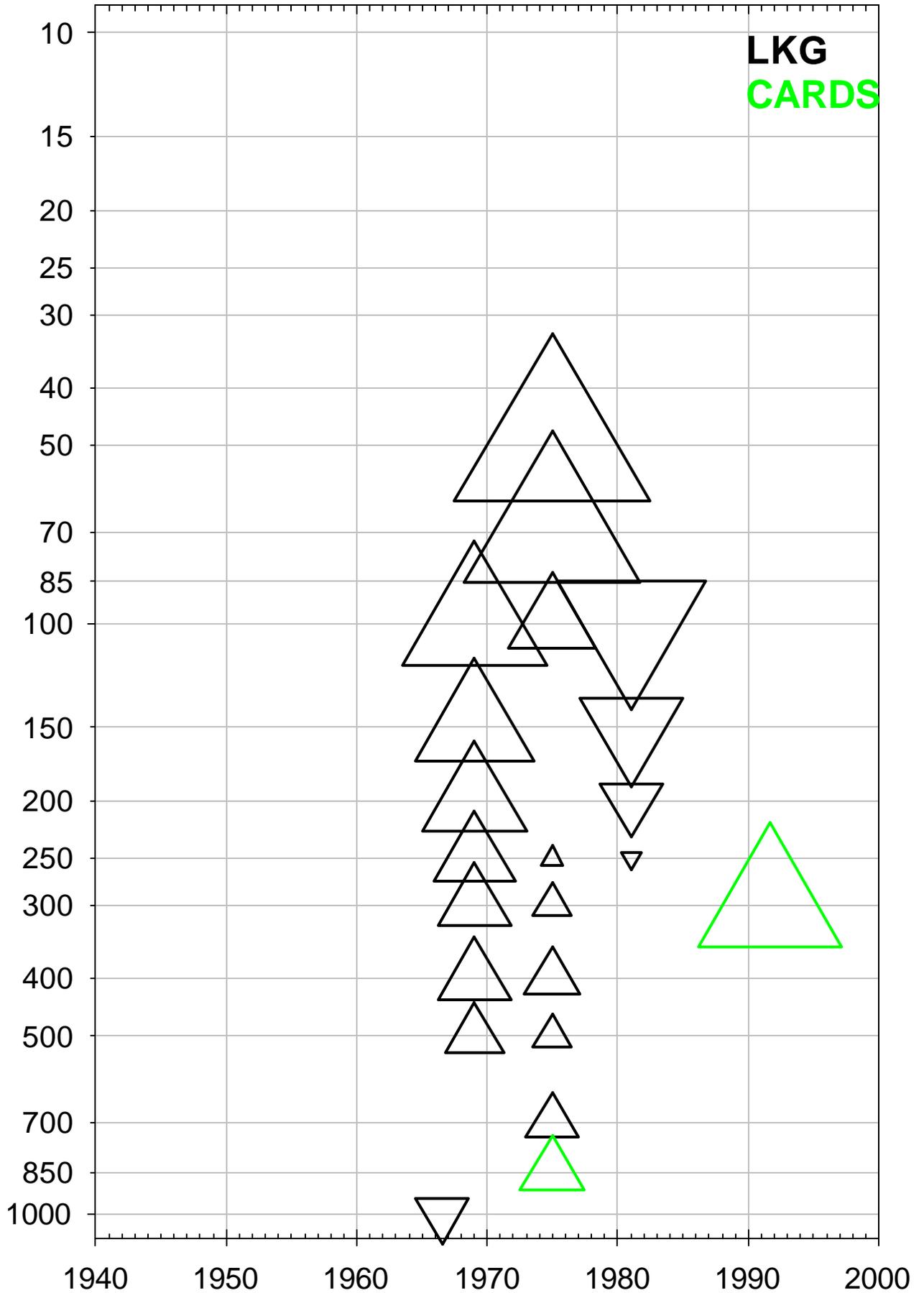
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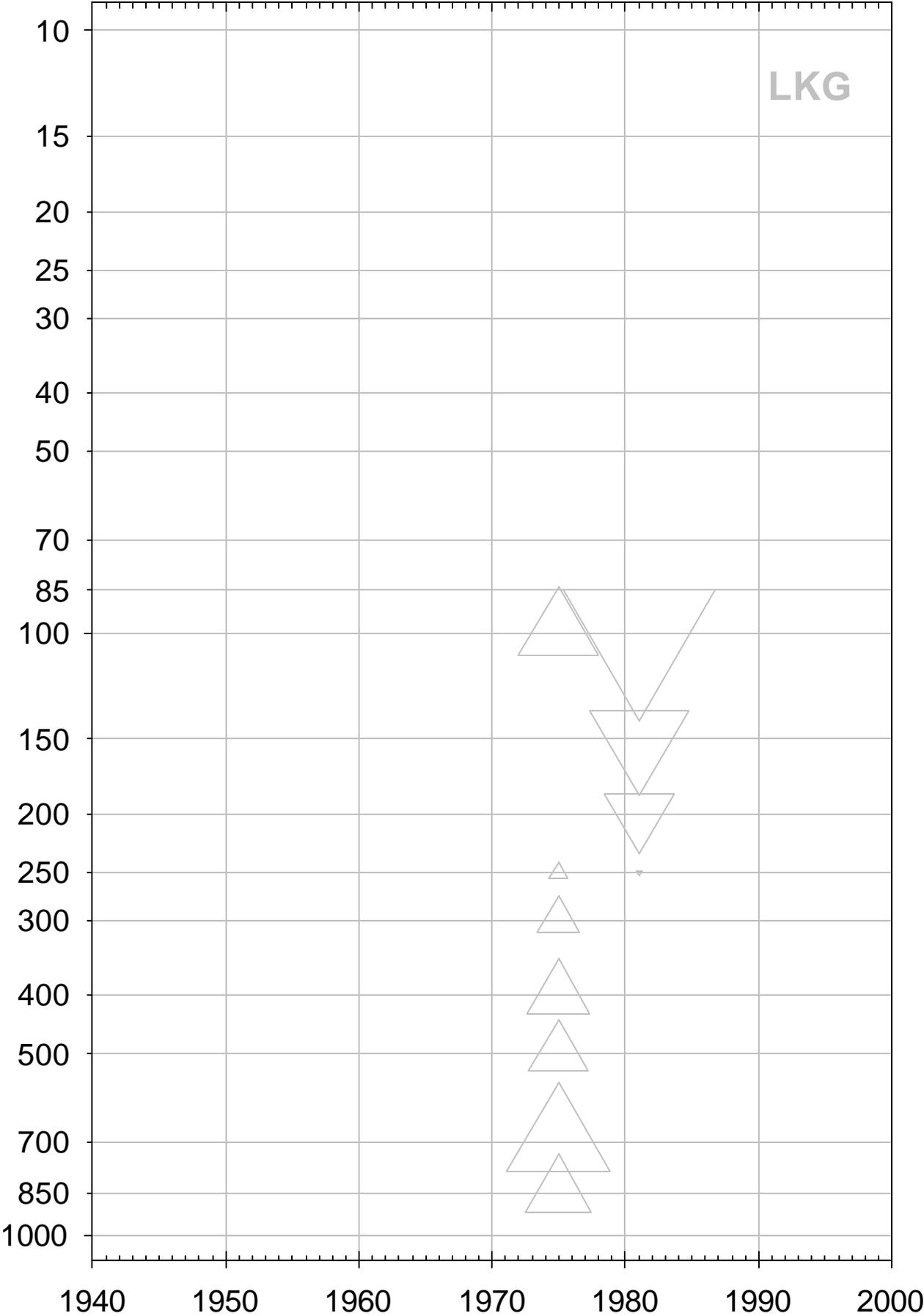
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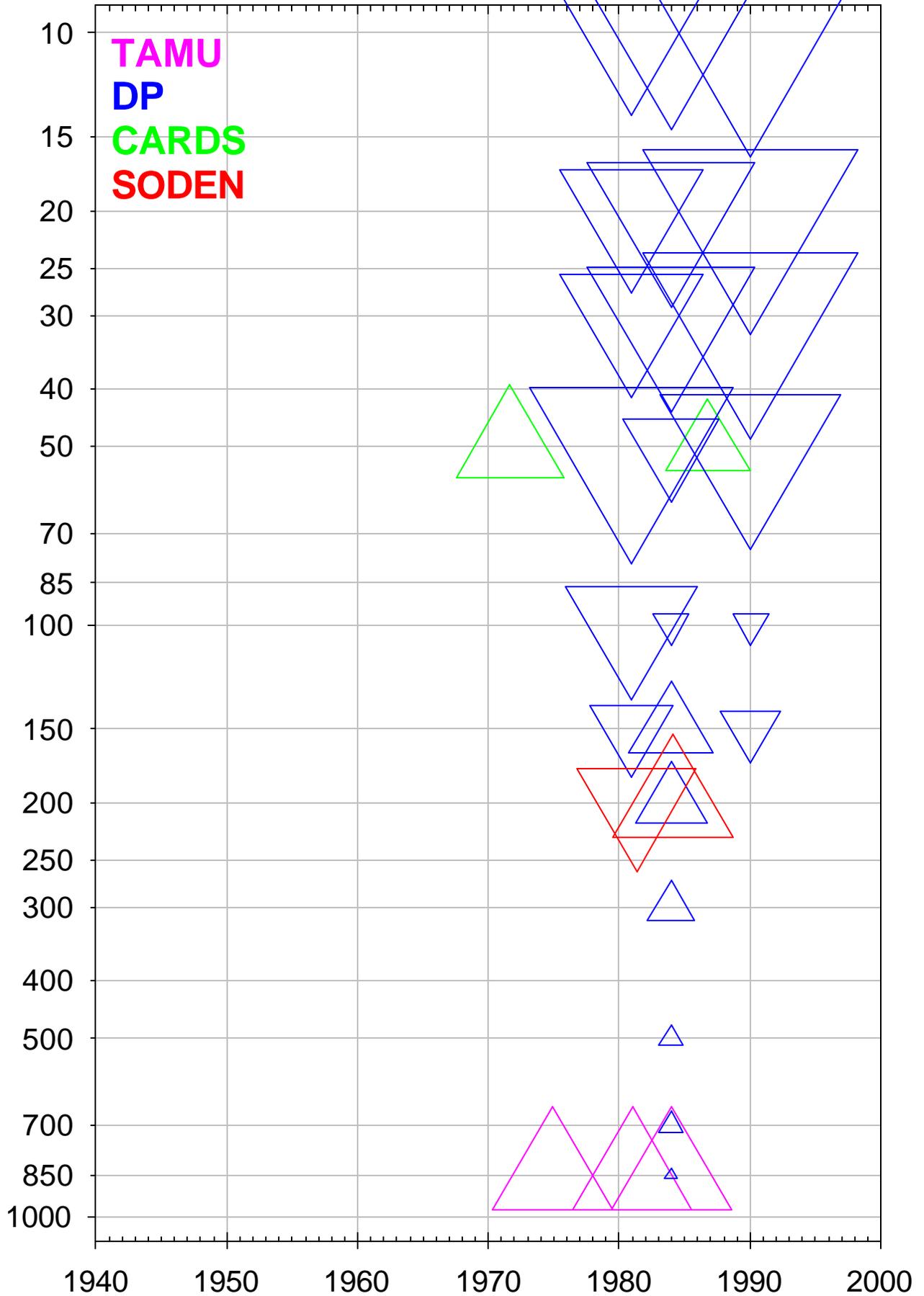
Hong Kong 45004 00Z



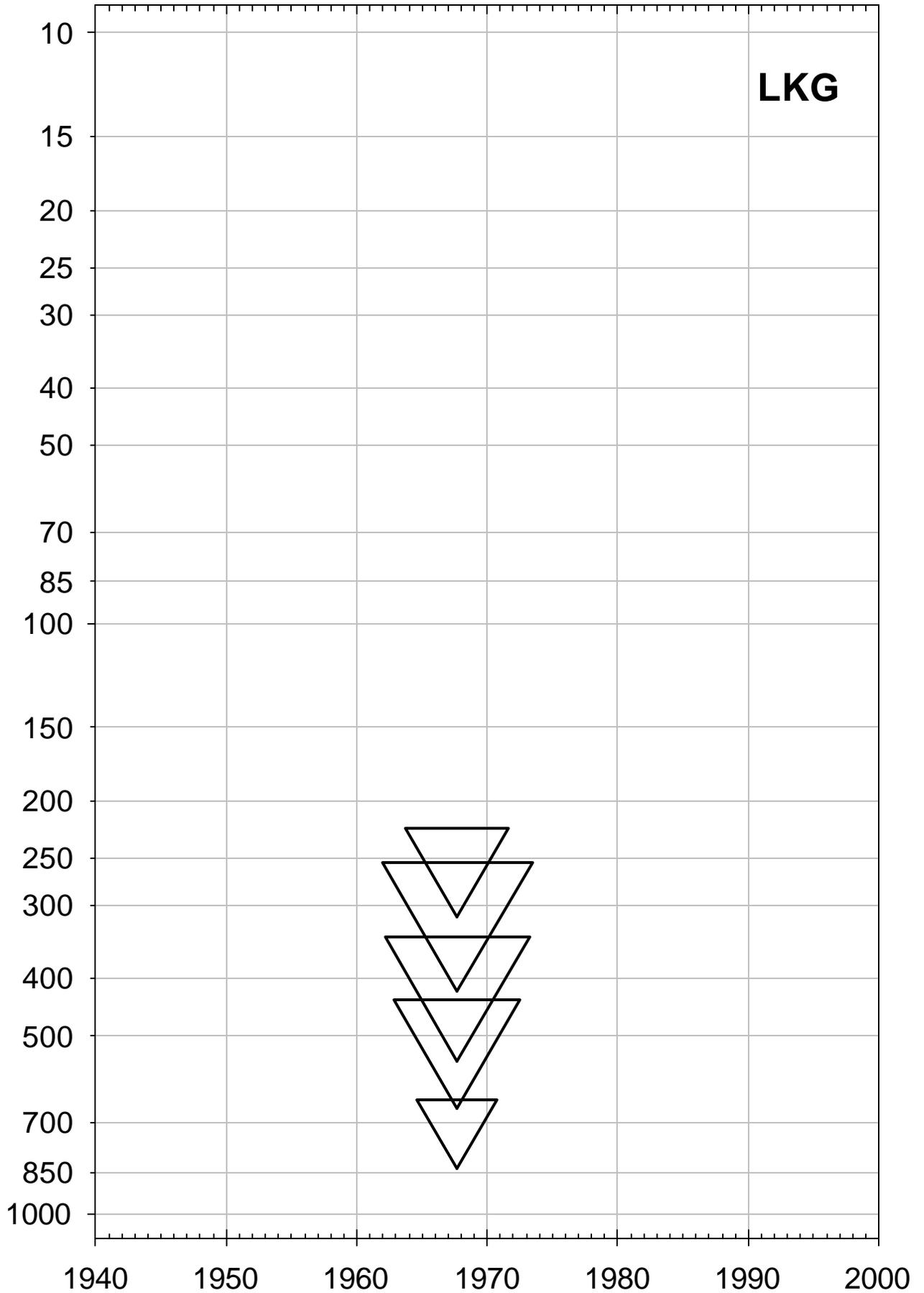
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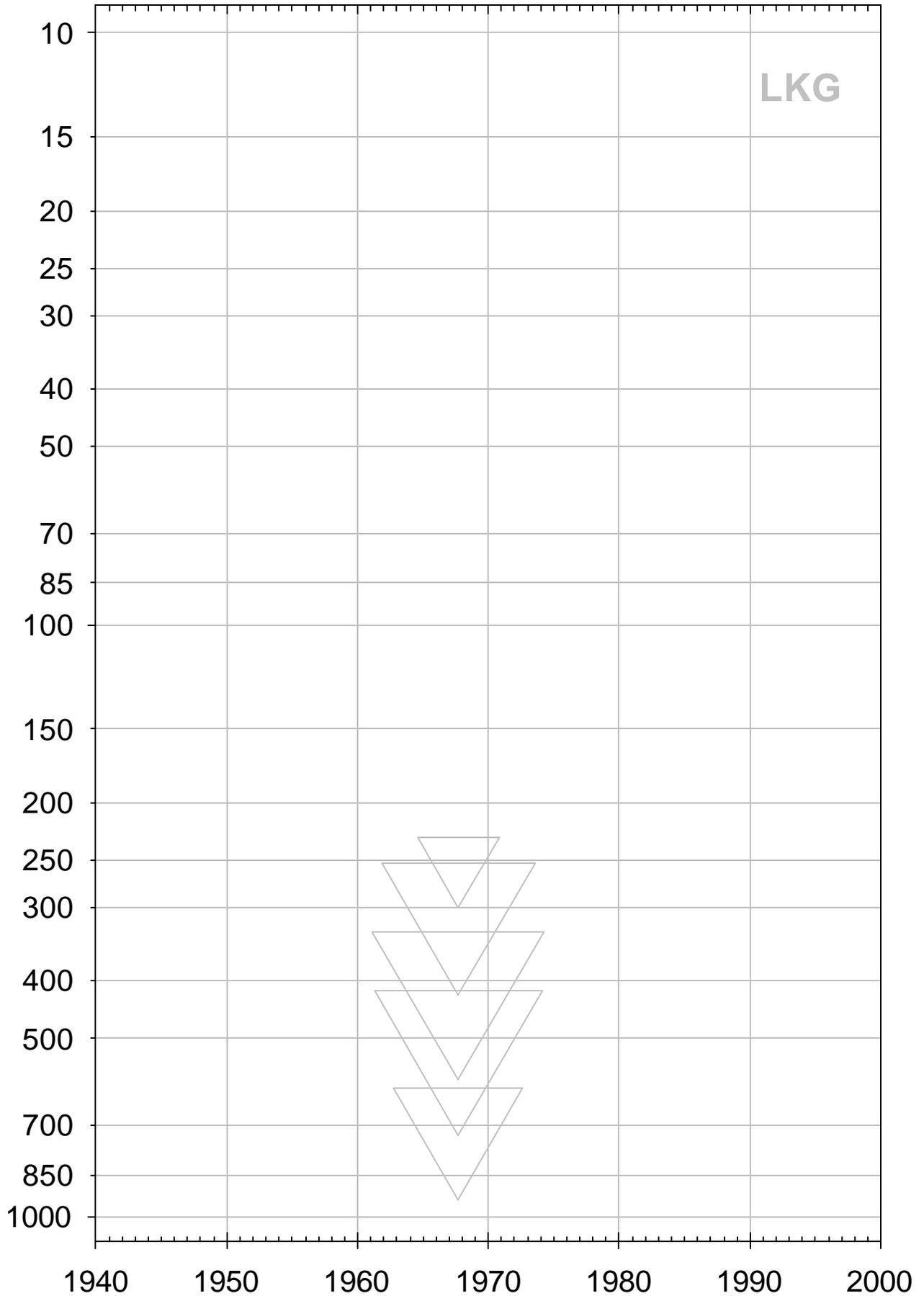
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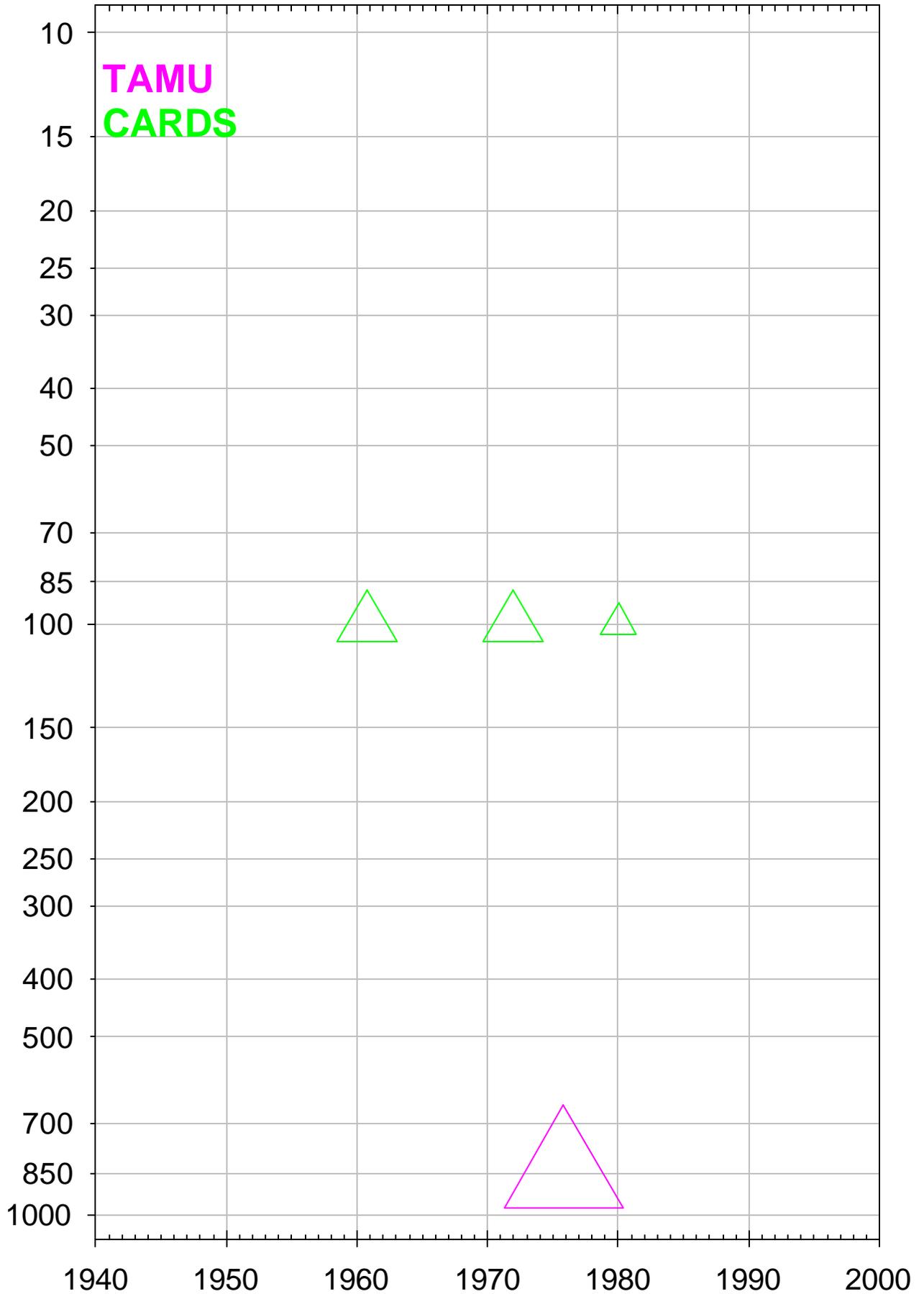
52681 Minqin 00Z



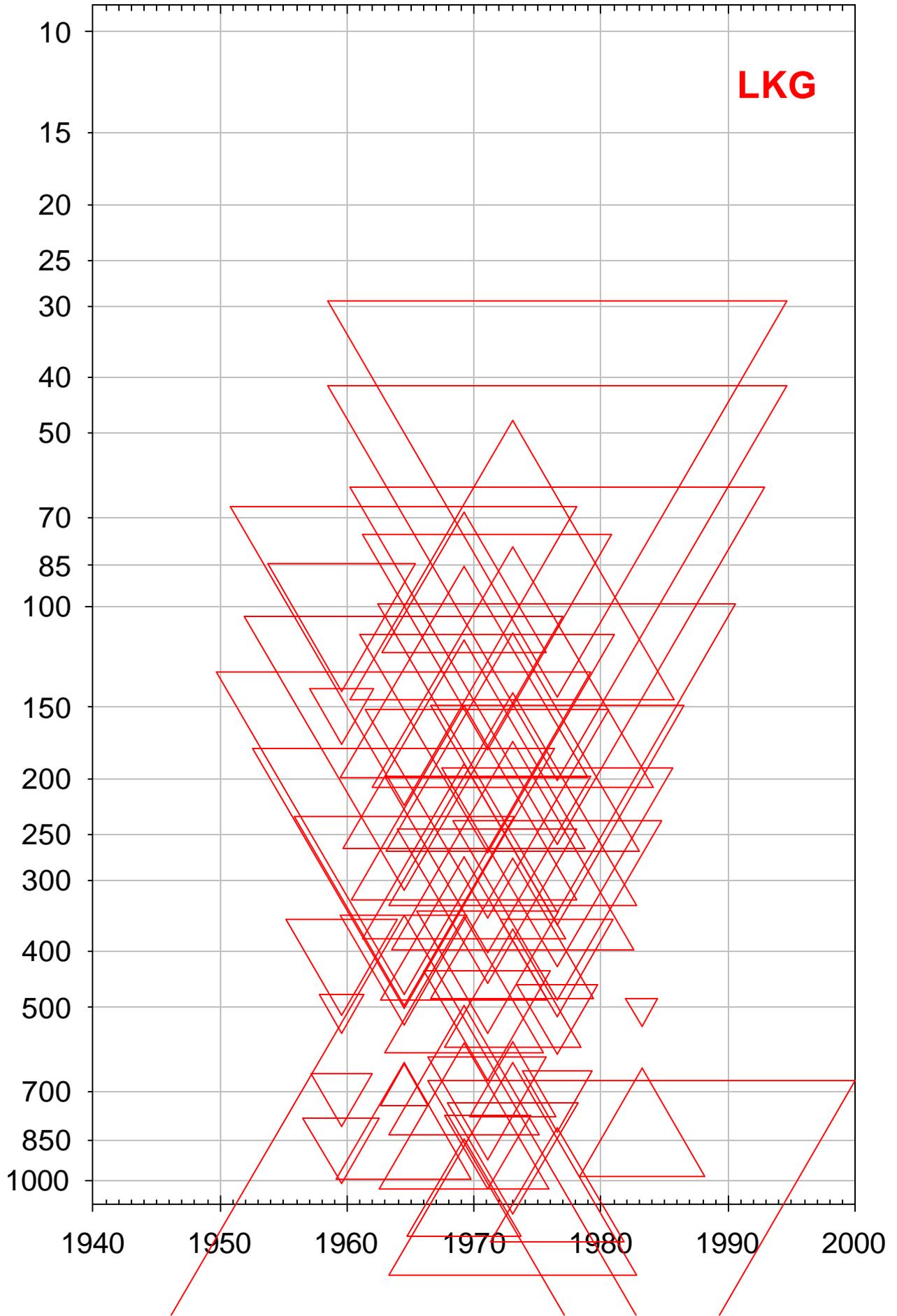
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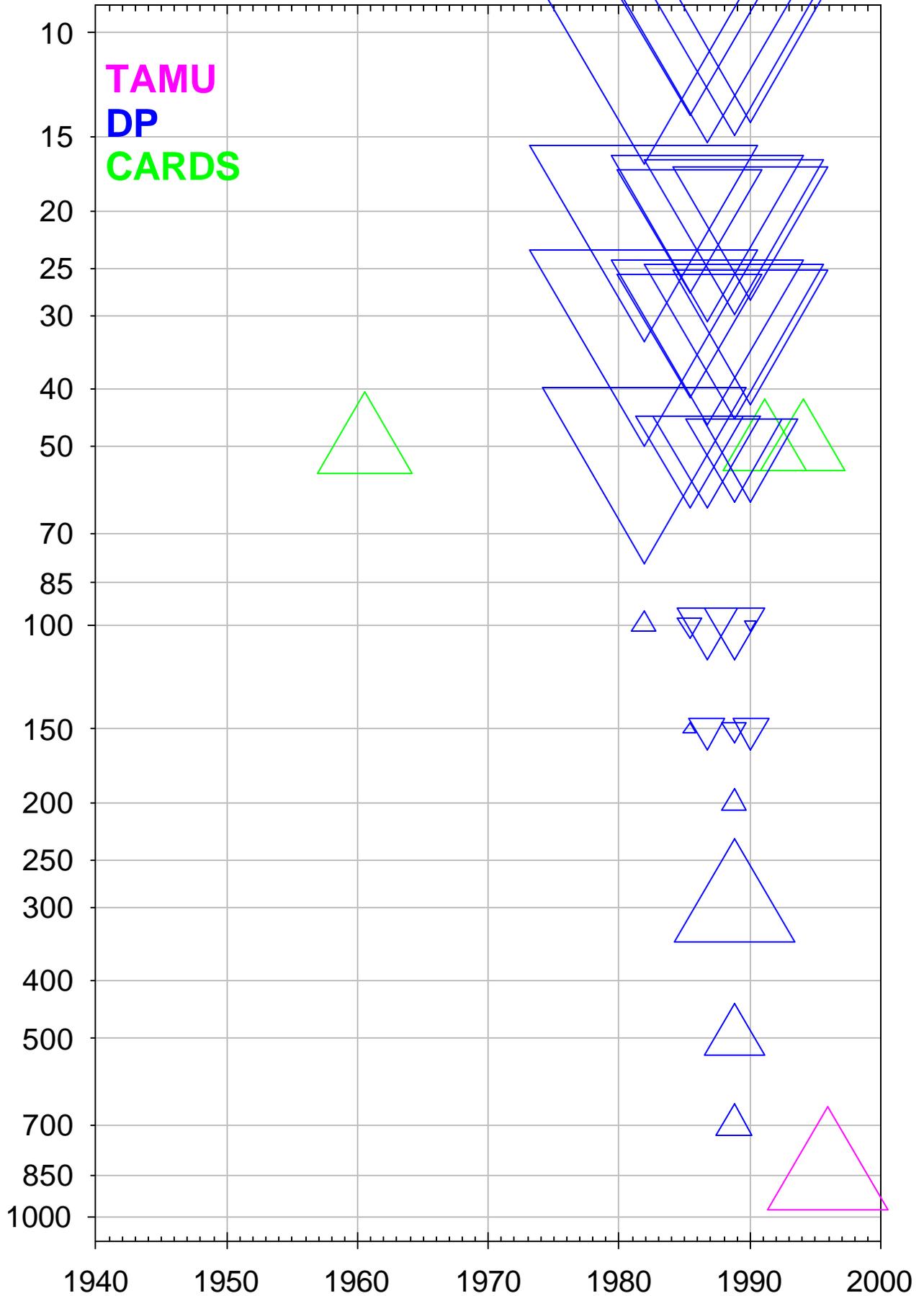
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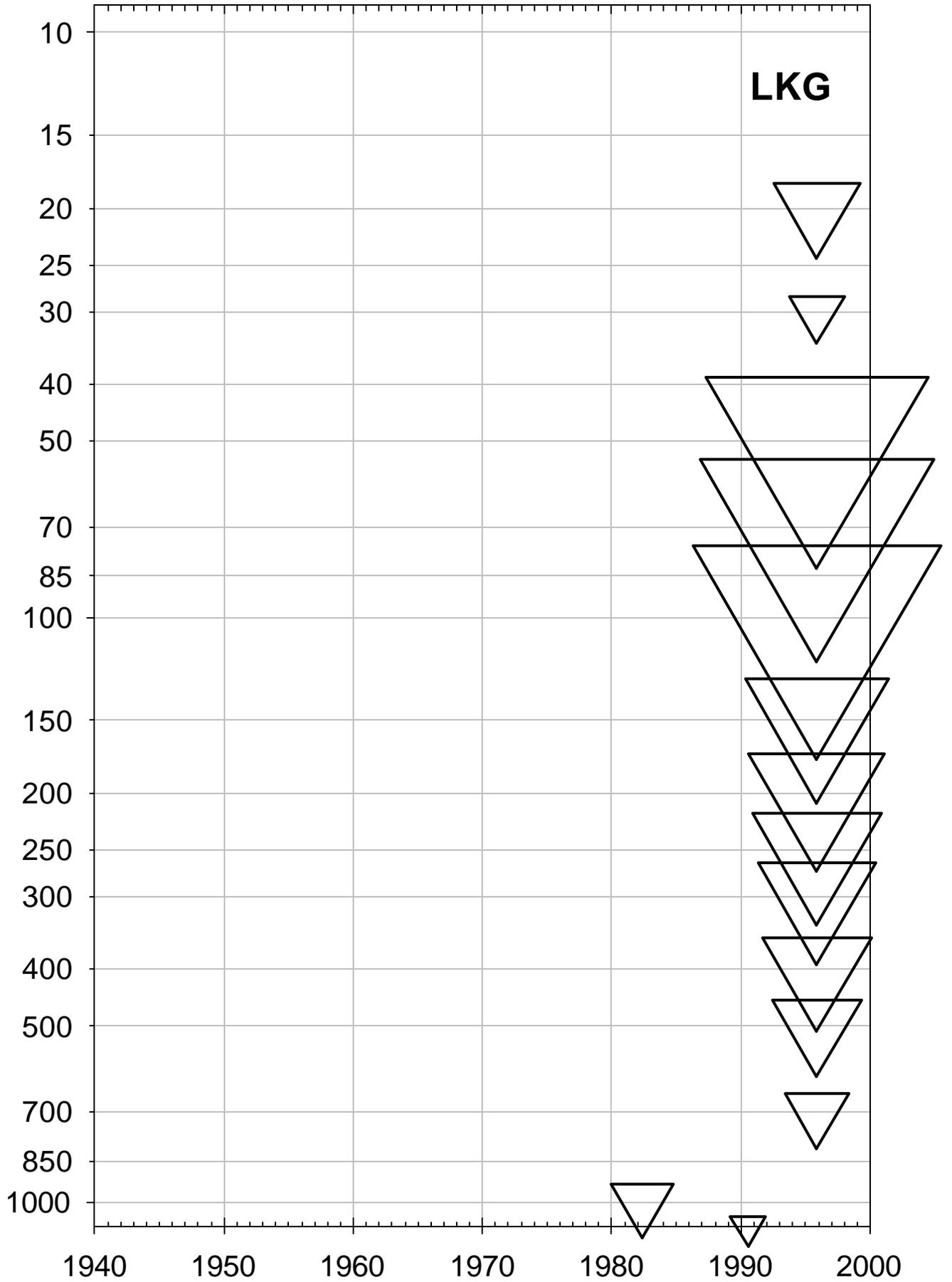
61052 Niamey 99Z



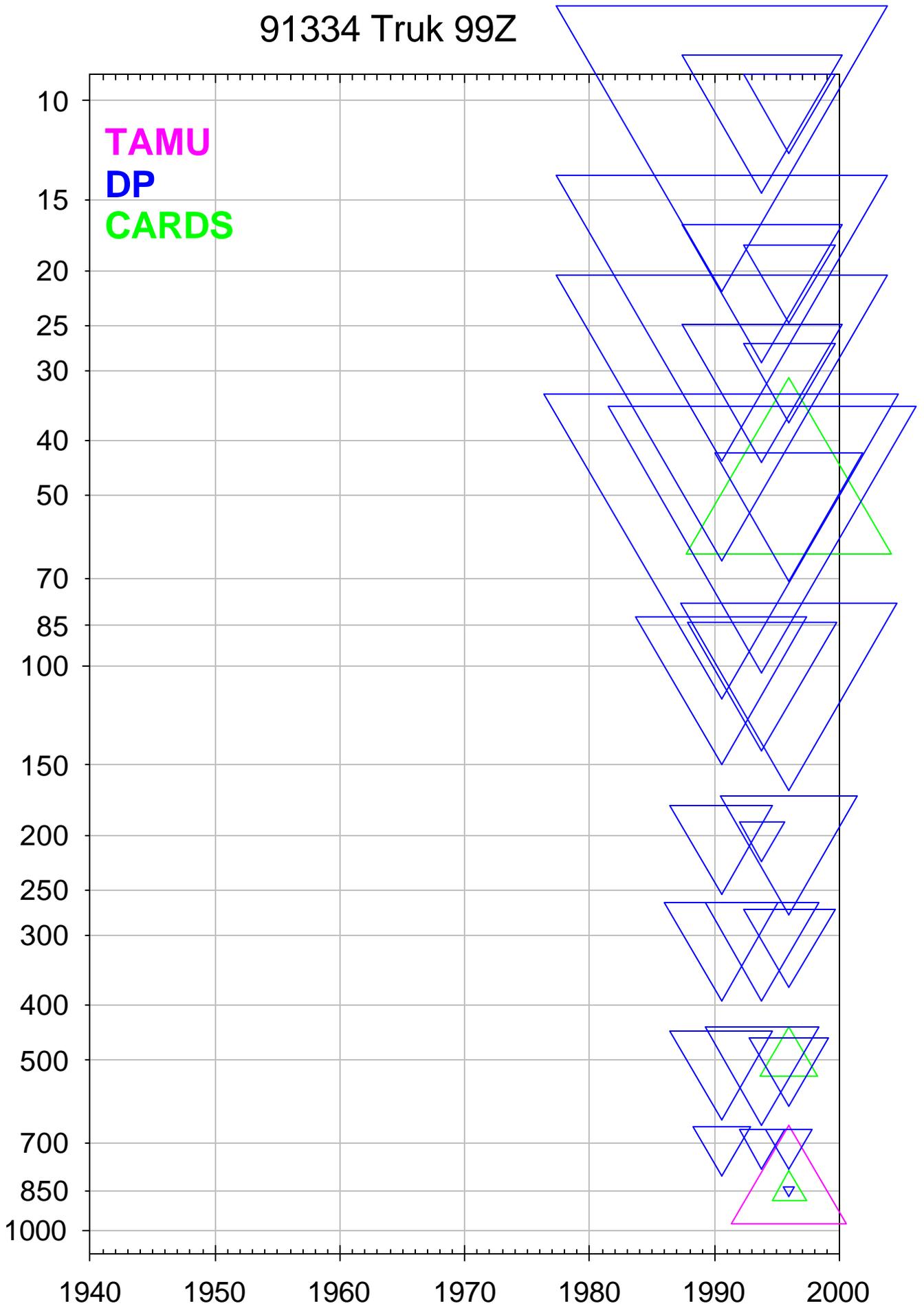
72775 Great Falls 99Z



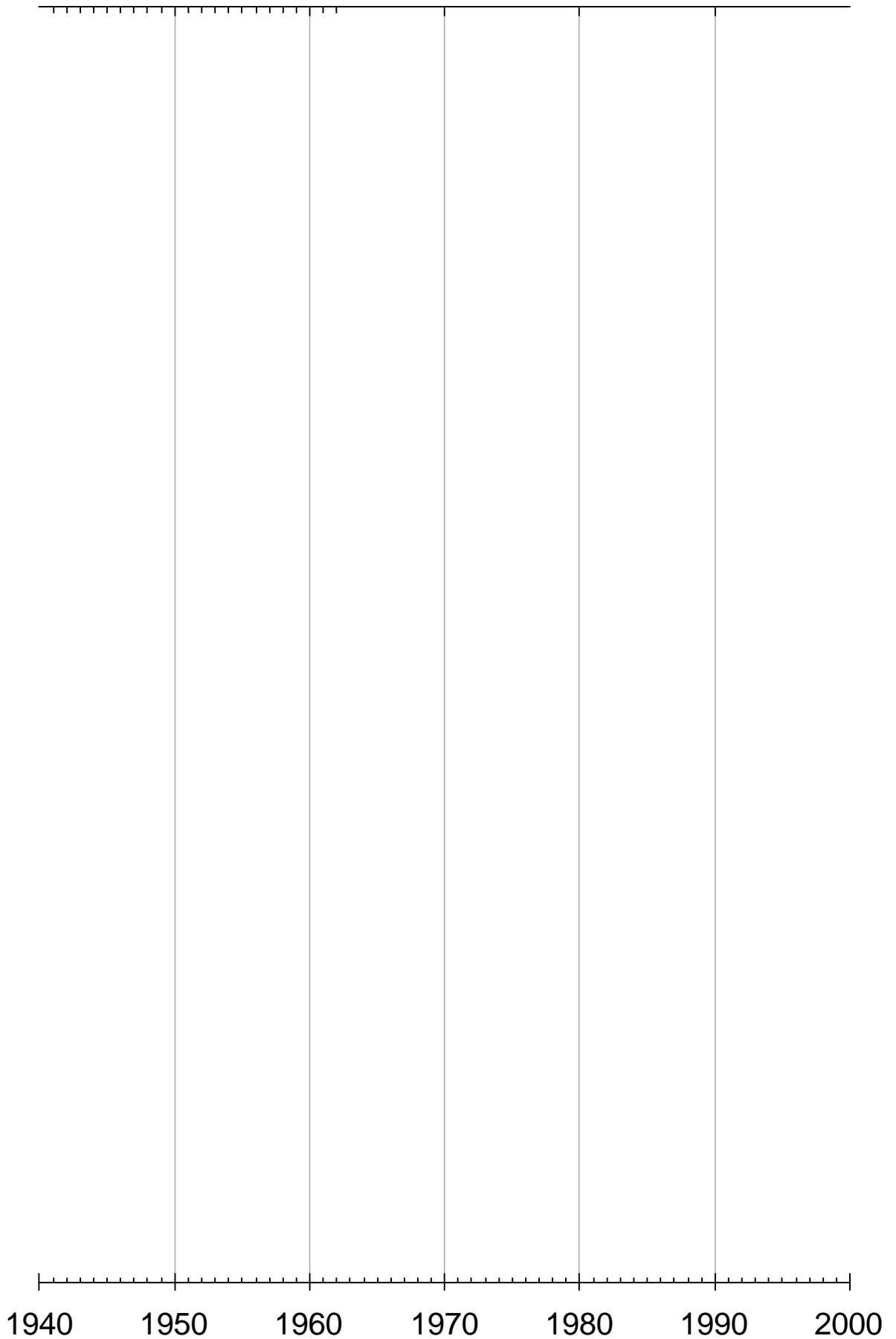
91334 Truk 00Z



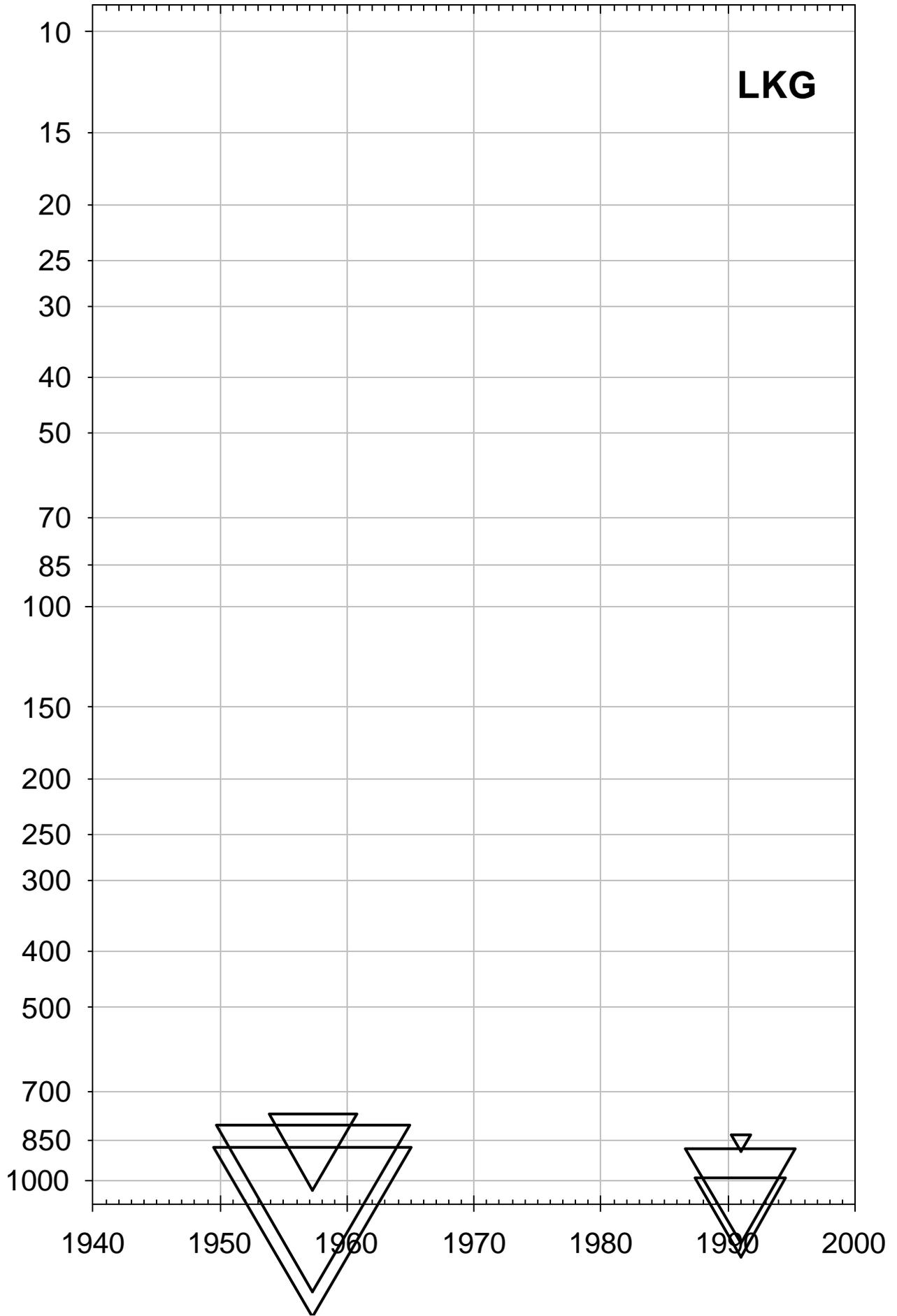
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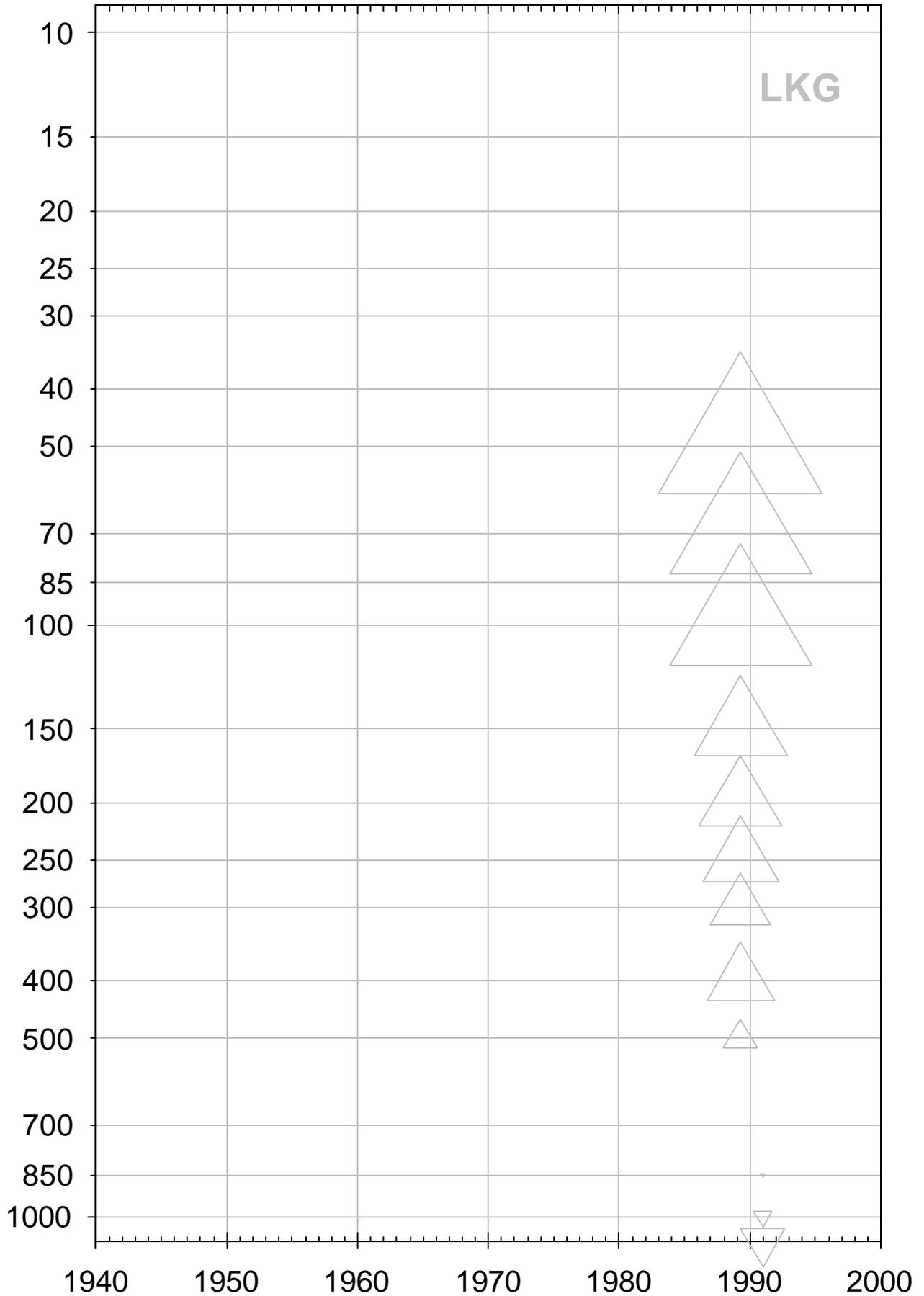
91376 Majuro 99Z



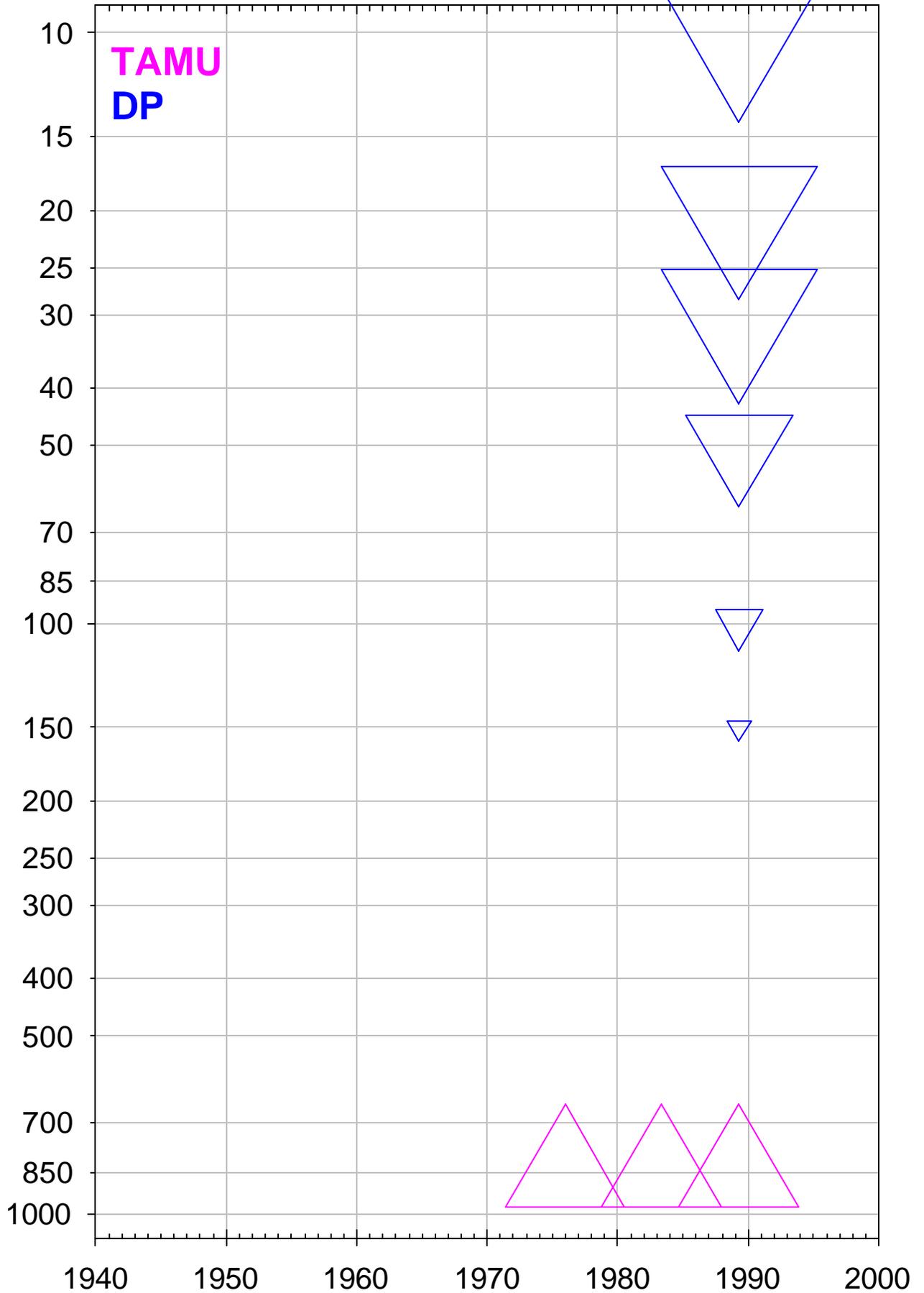
93844 Invercargill 00Z



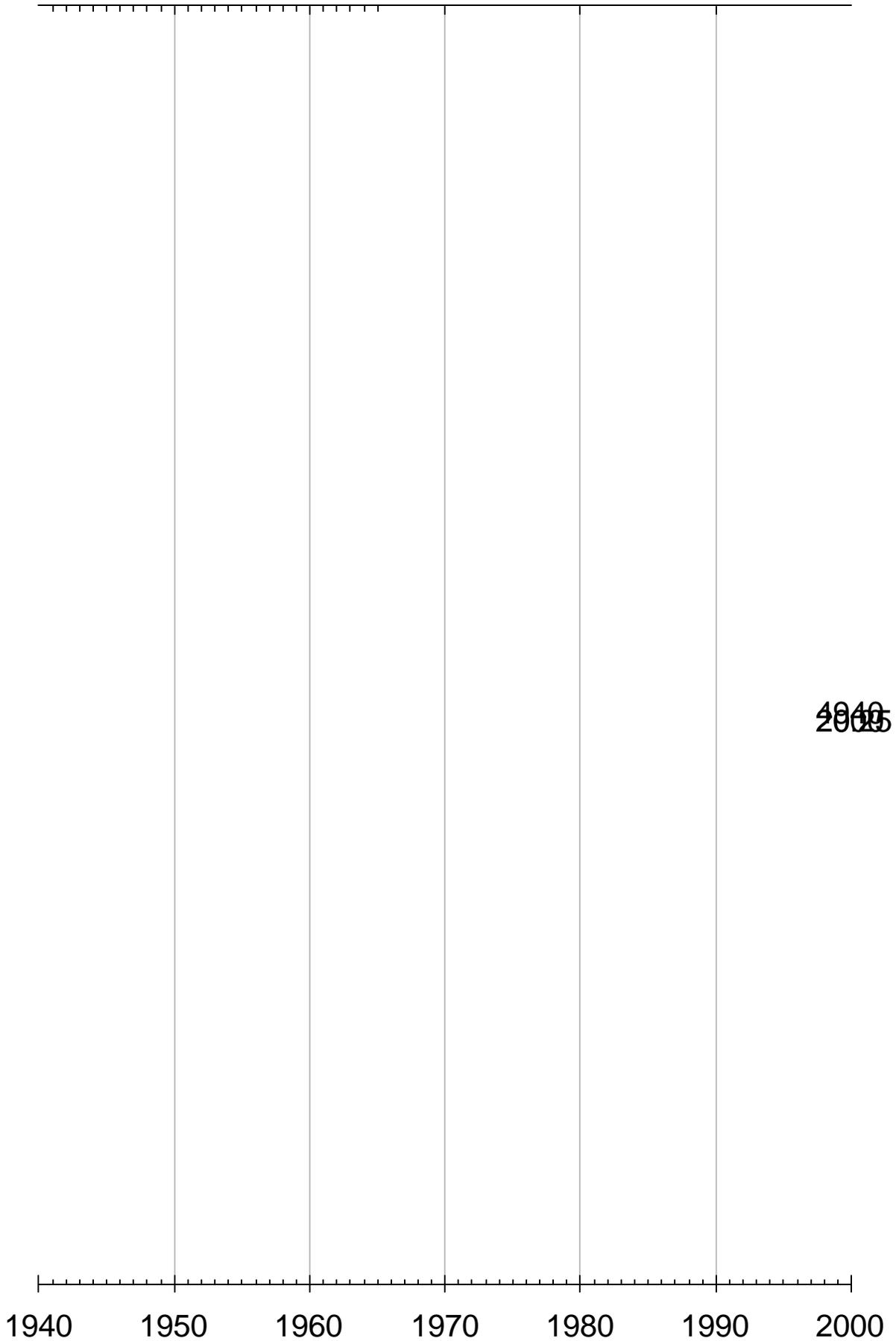
93844 Invercargill 12Z



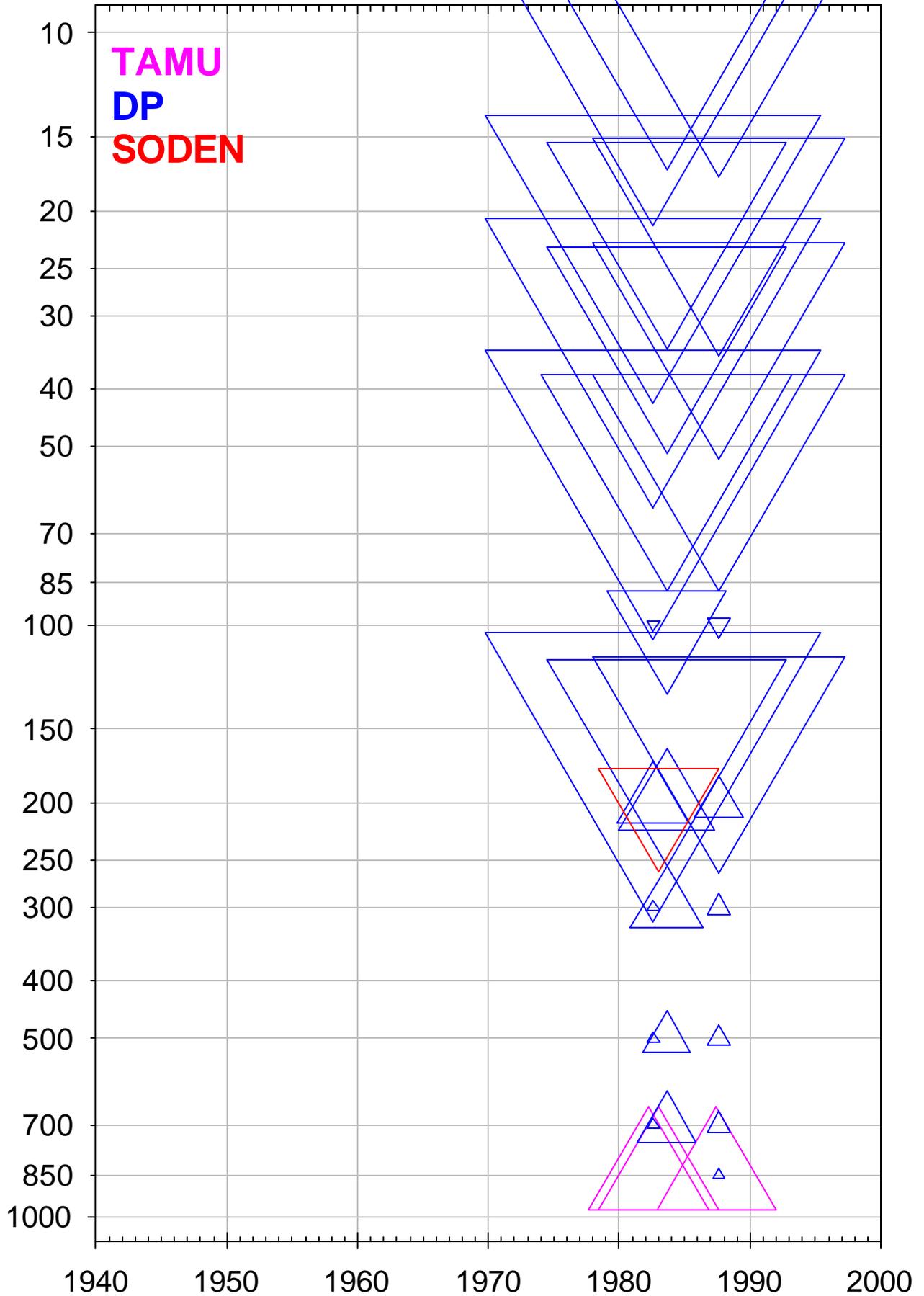
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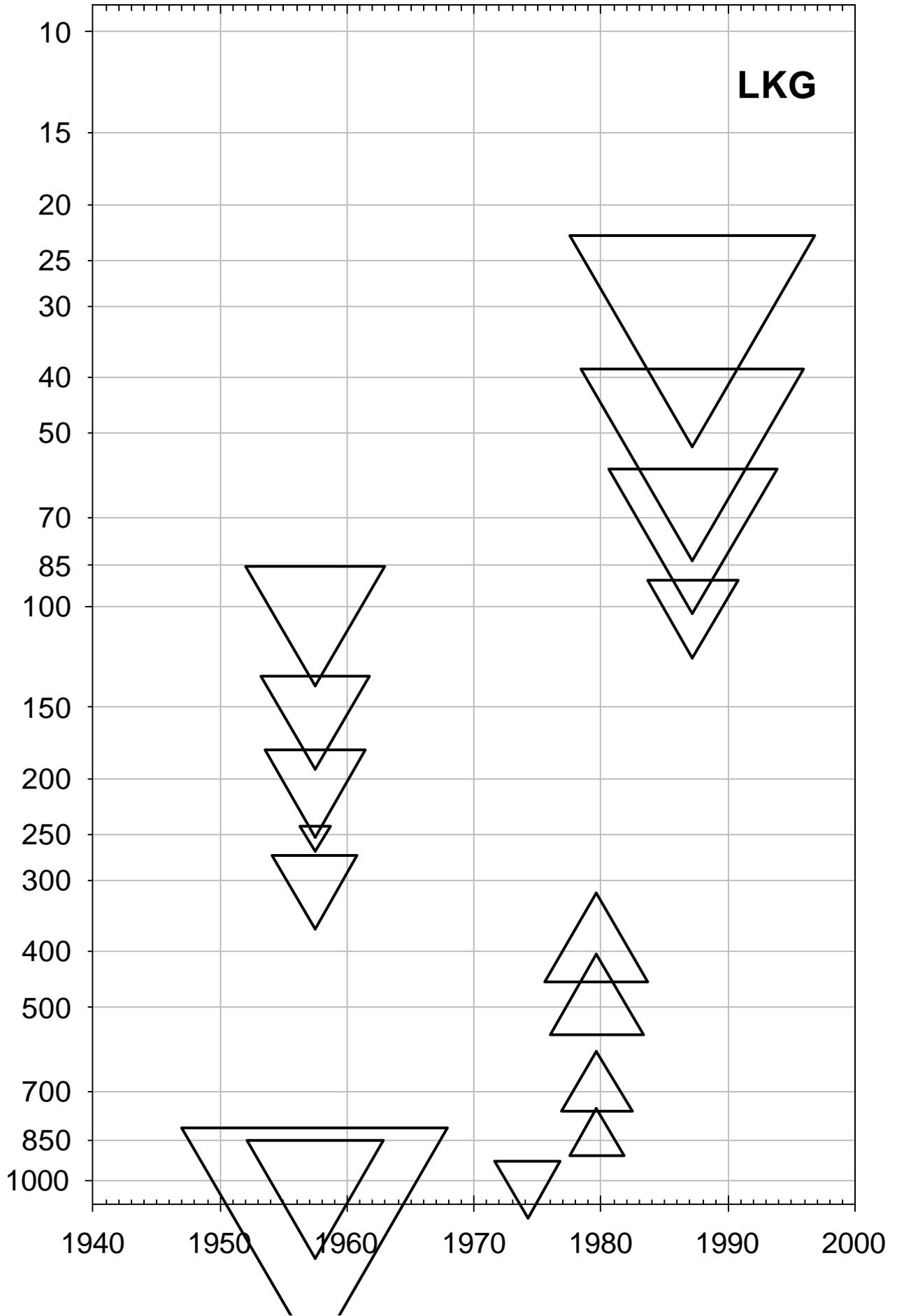
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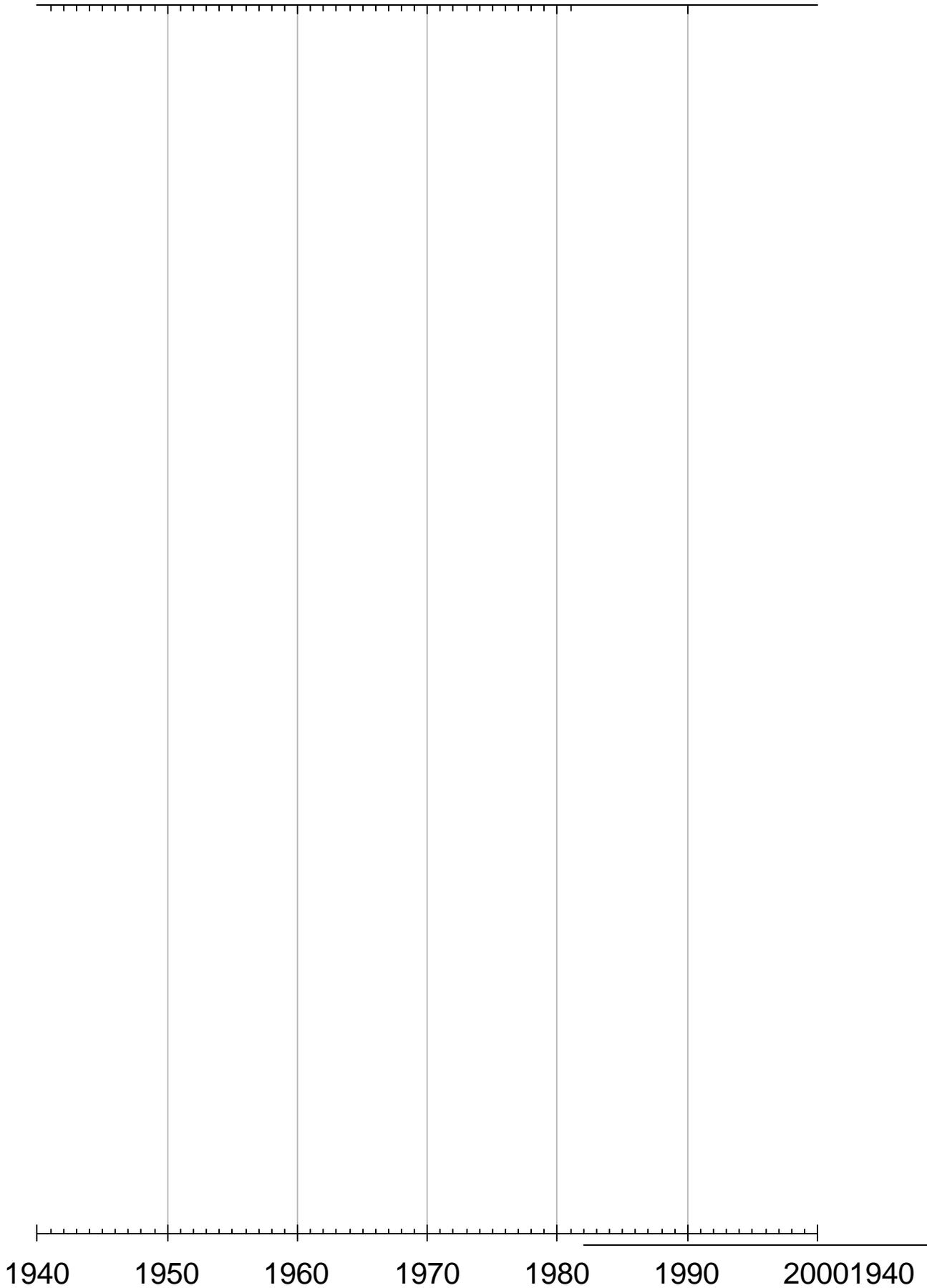
94120 Darwin 99Z



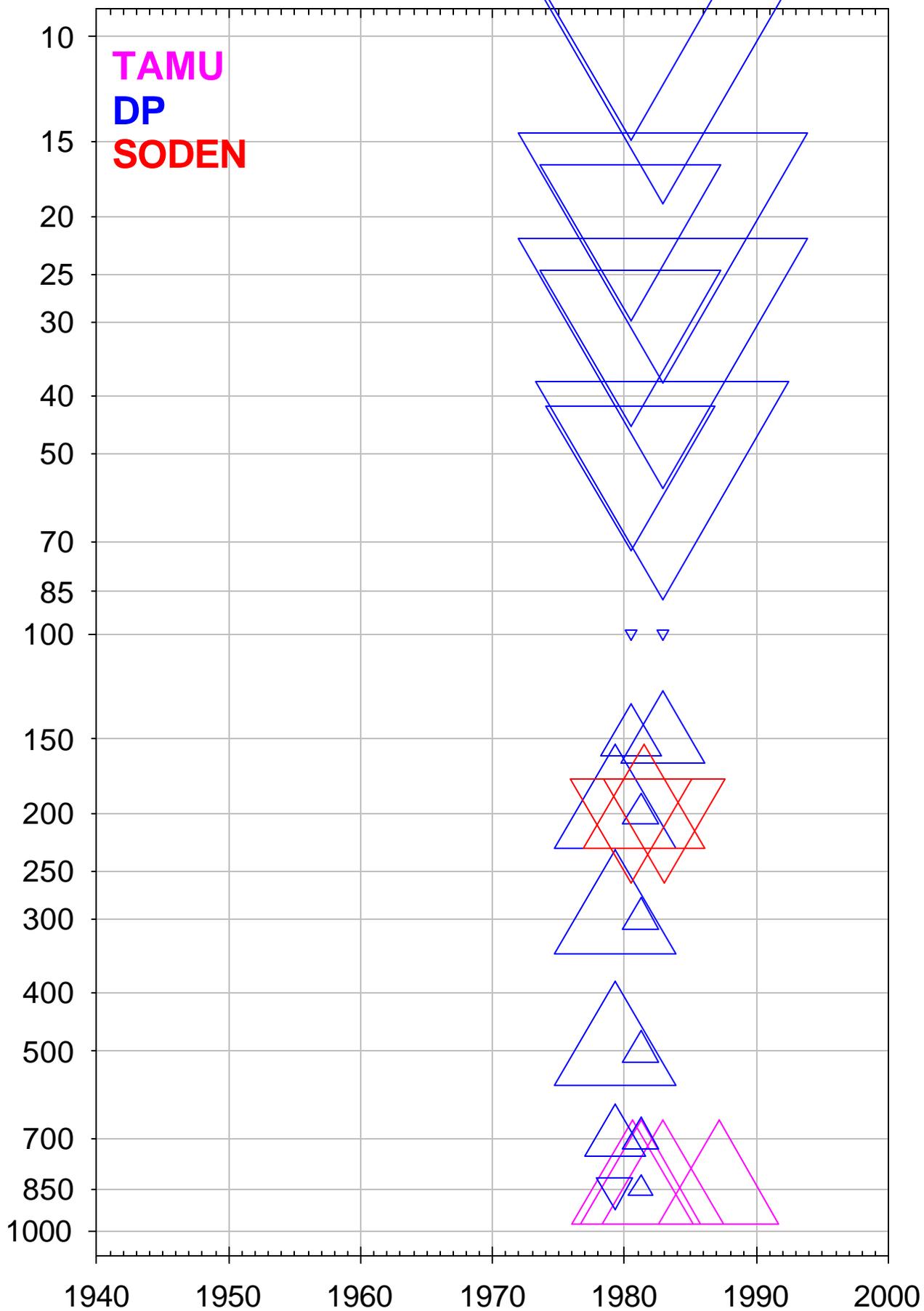
94672 Adelaide 00Z

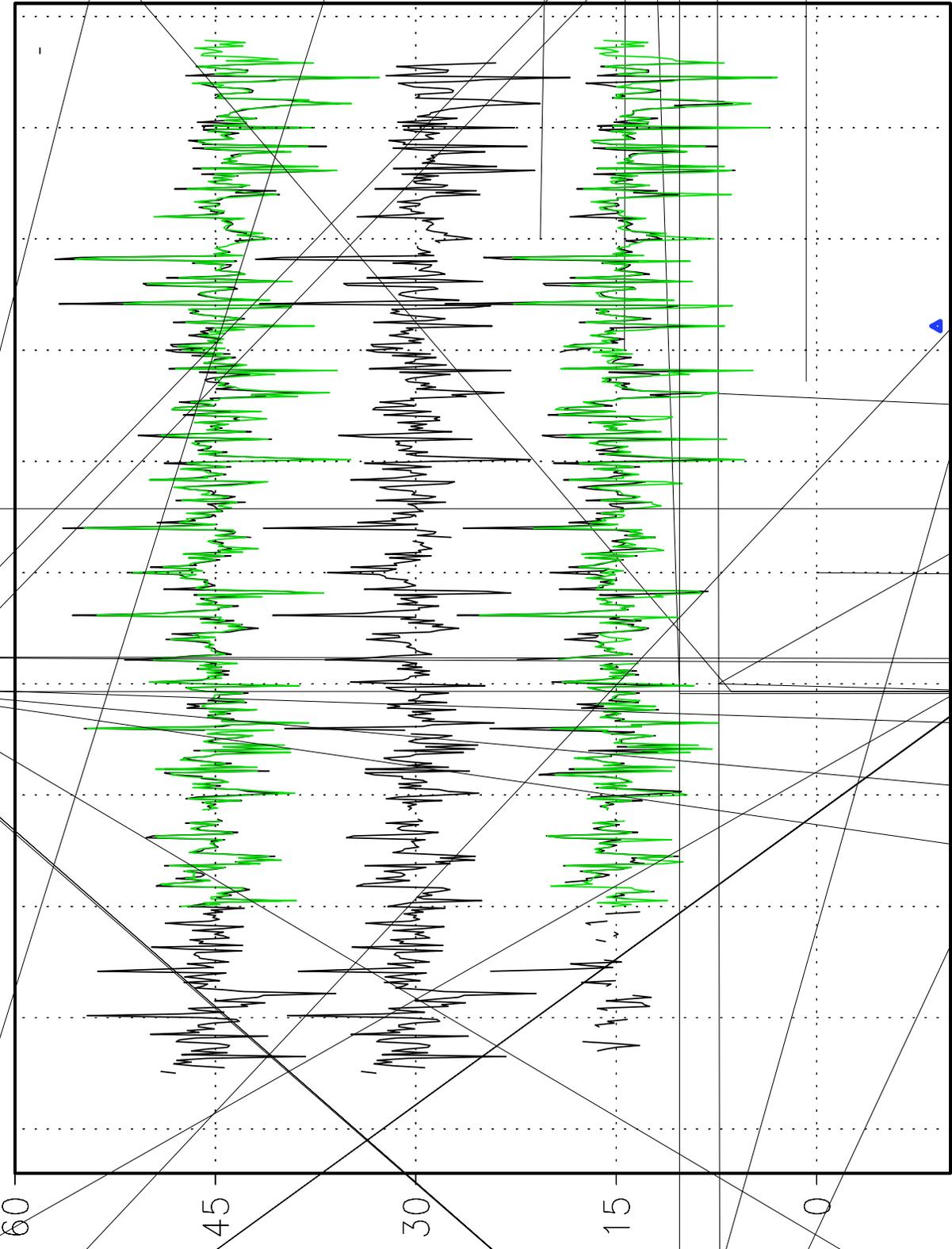


94672 Adelaide 12Z



94672 Adelaide 99Z





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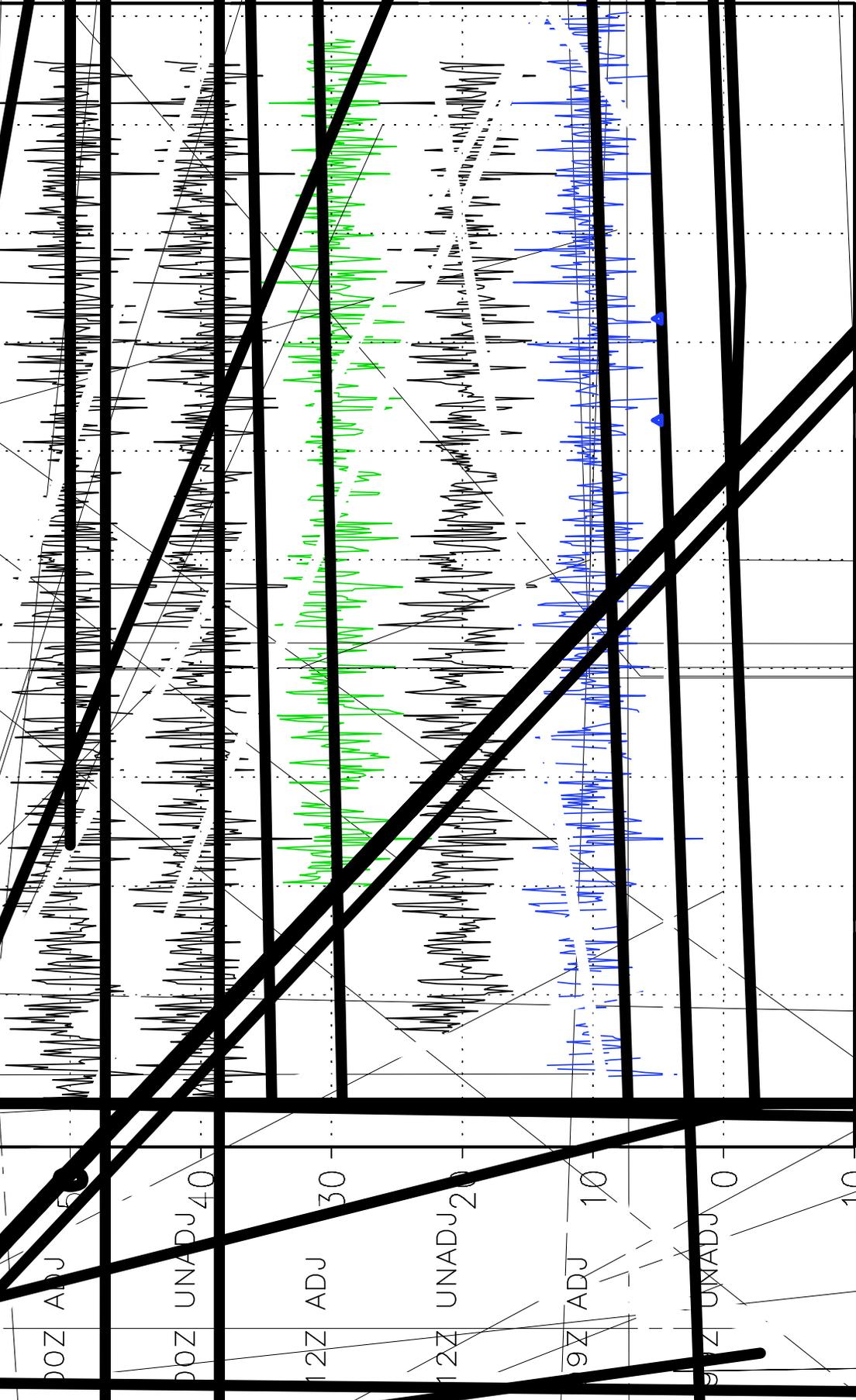
02036 Sadankyla 500 mb

60

CARDS

PAPER

LKG



DOZ ADJ 50

DOZ UNADJ 40

12Z ADJ 30

12Z UNADJ 20

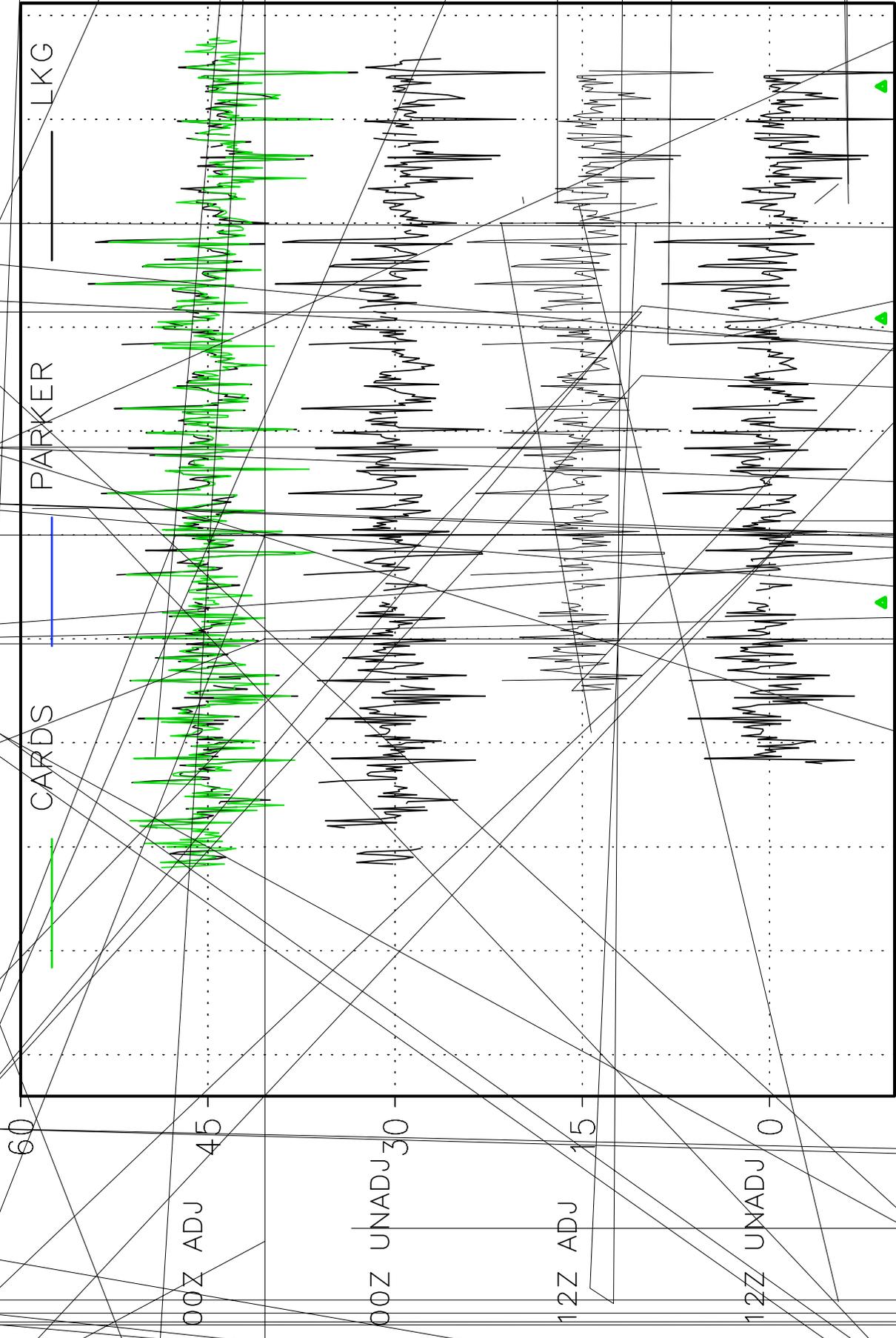
9Z ADJ 10

9Z UNADJ 0

-10

1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000

23418 Pechora 100 mb



60

00Z ADJ

45

00Z UNADJ

30

12Z ADJ

15

12Z UNADJ

0

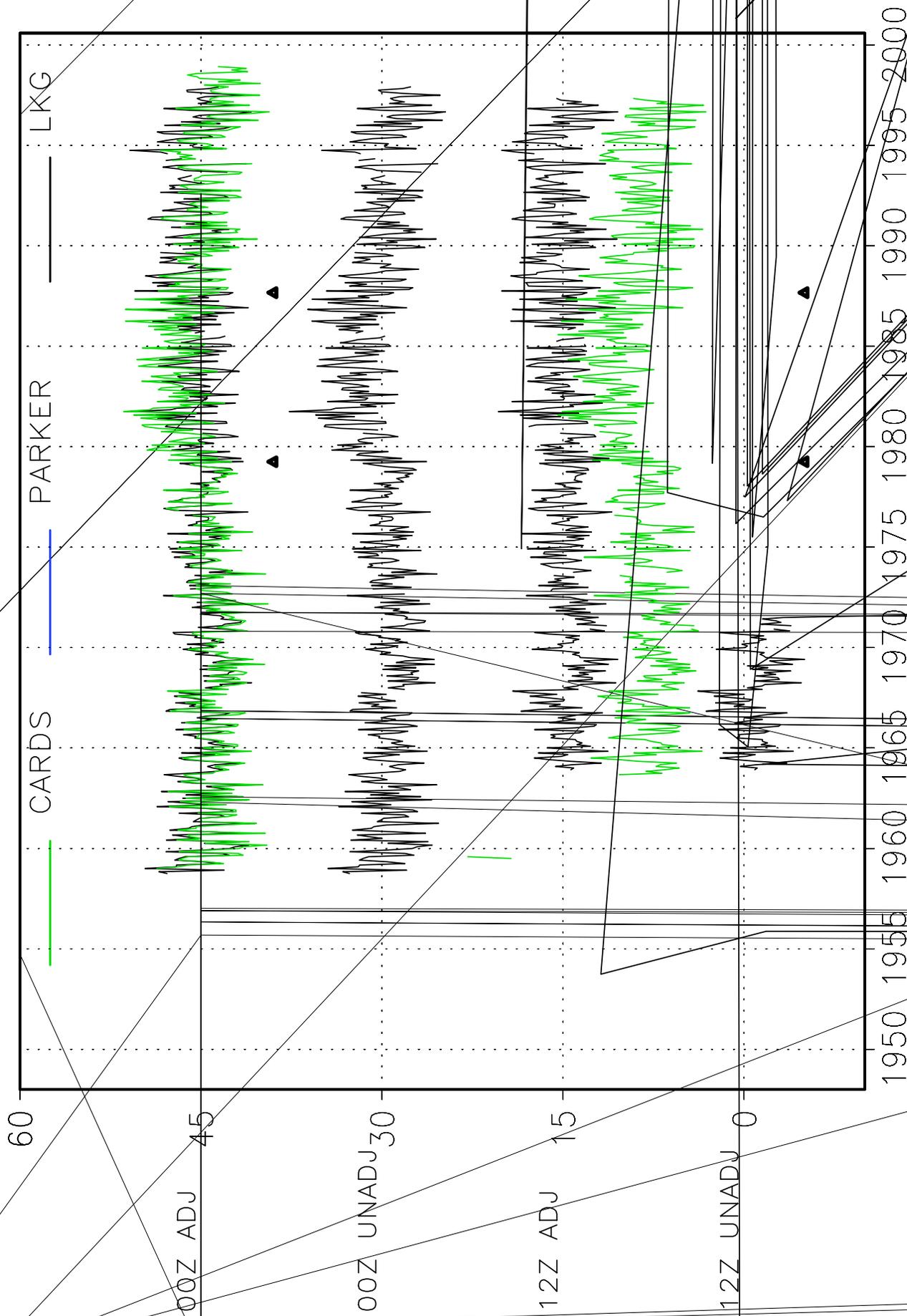
CARDS

PARKER

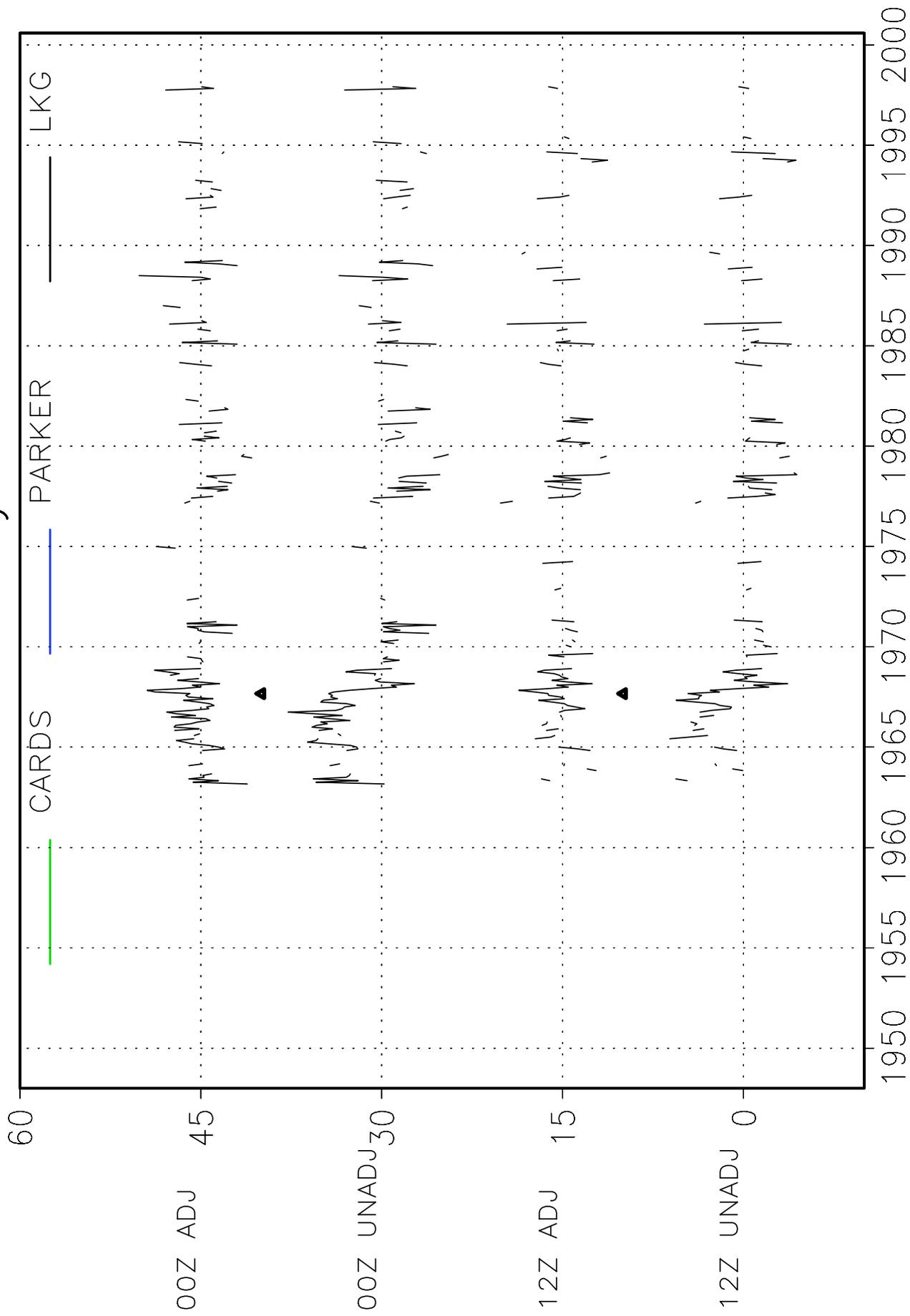
LKG

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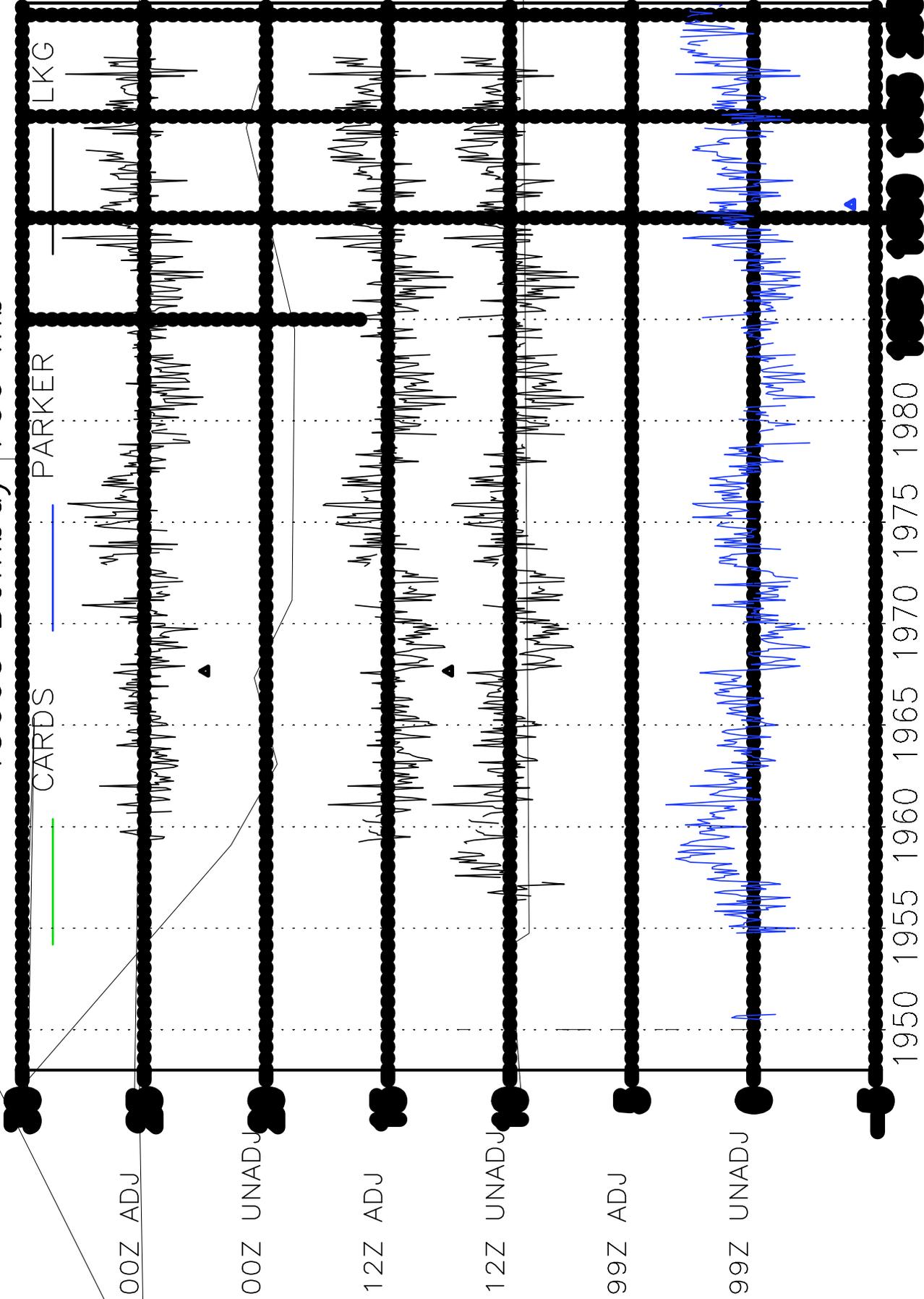
23418 Pechora 400 mb



43003 Bombay 100 mb

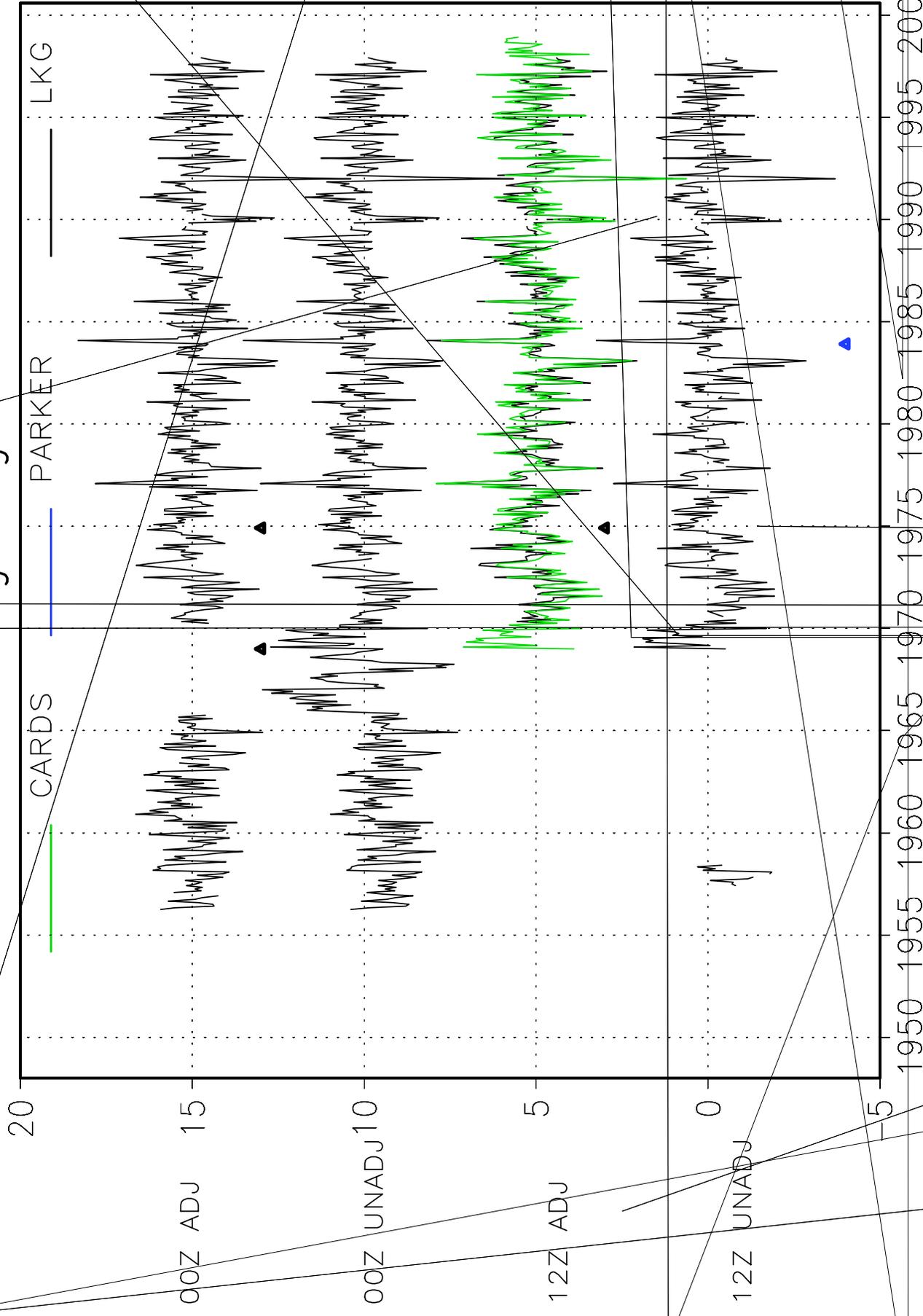


43003 Bombay 700 mb

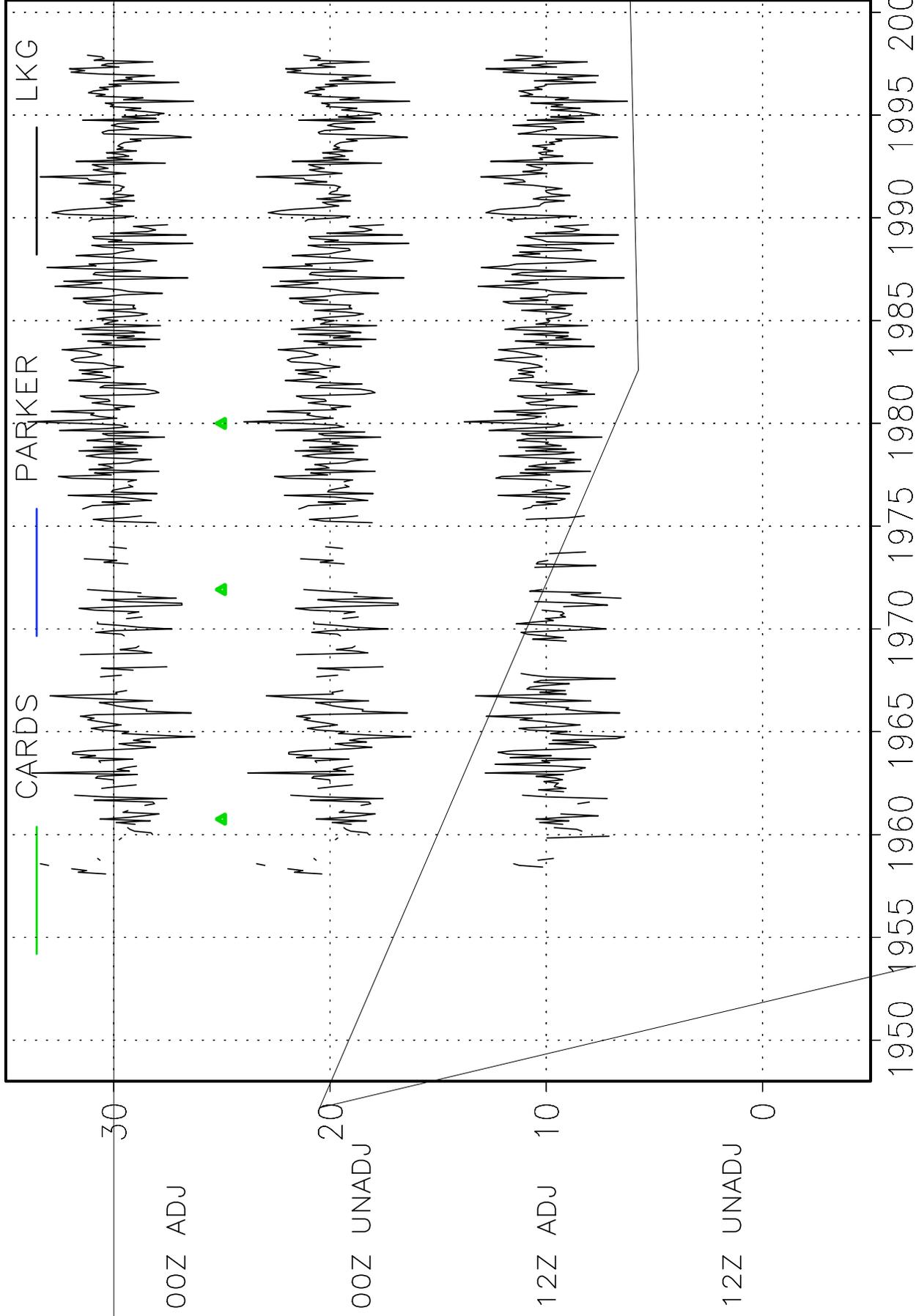




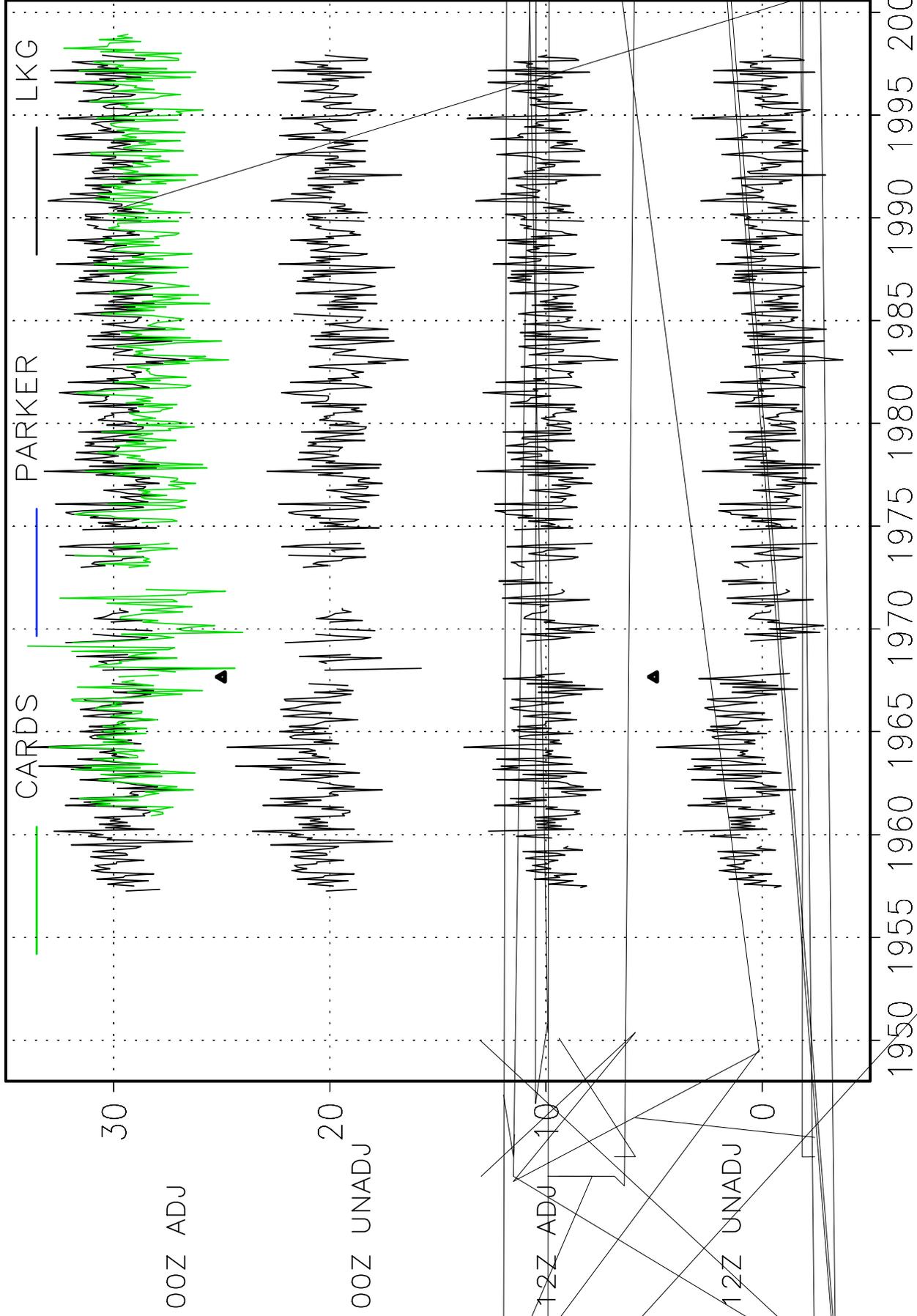
45004 Hong Kong 500 mb



52681 Mingin 100 mb

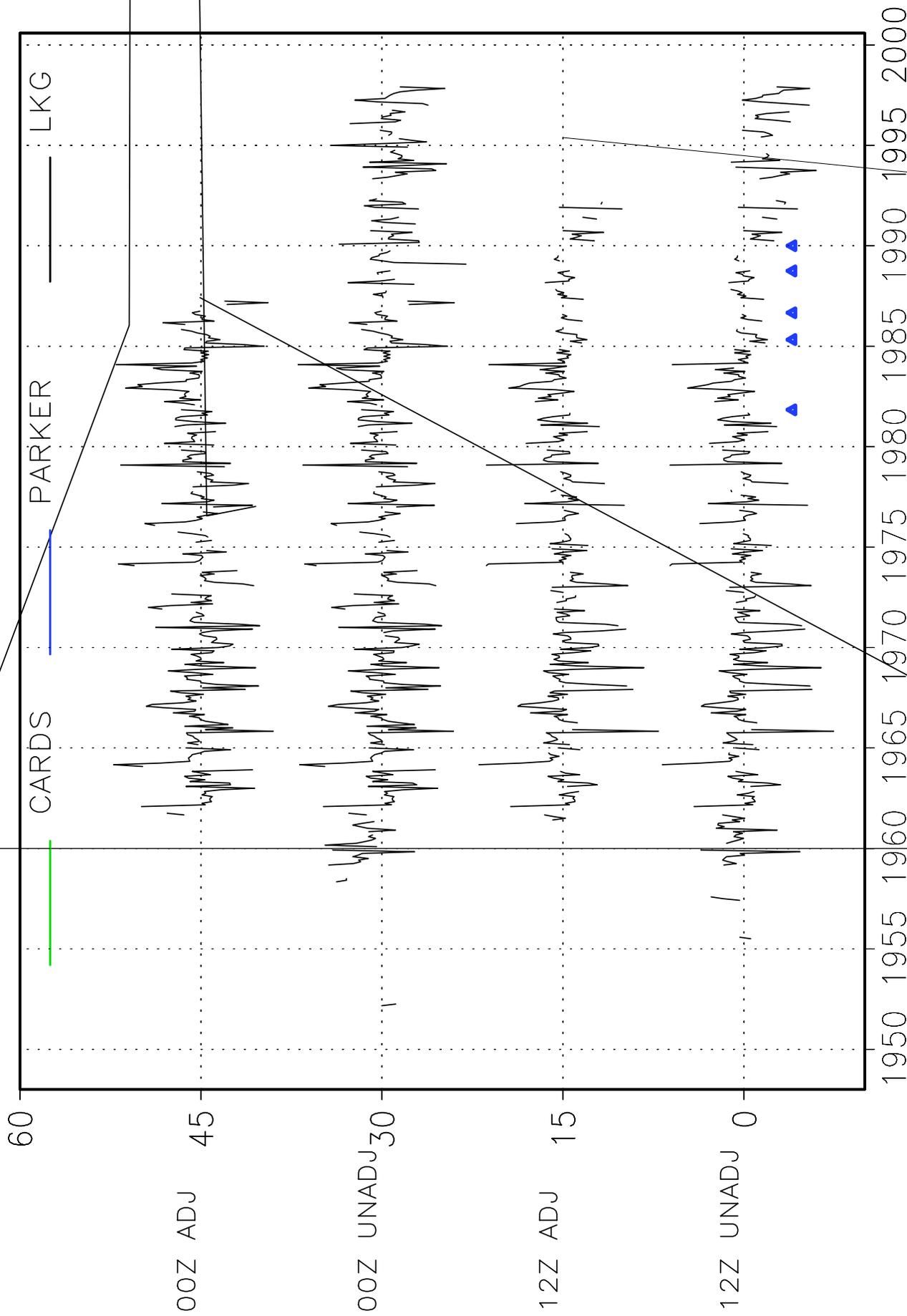


52681 Mingin 500 mb

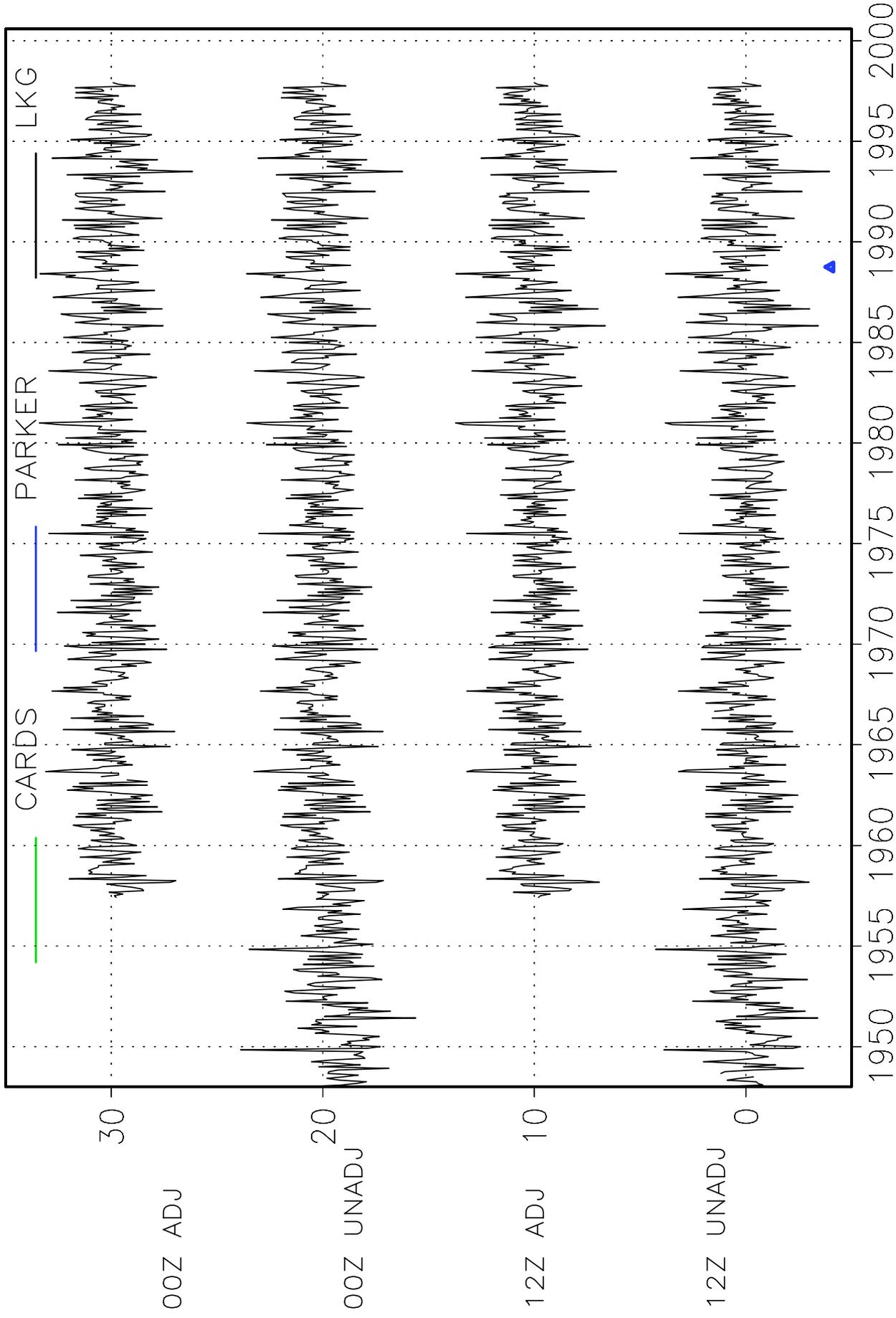




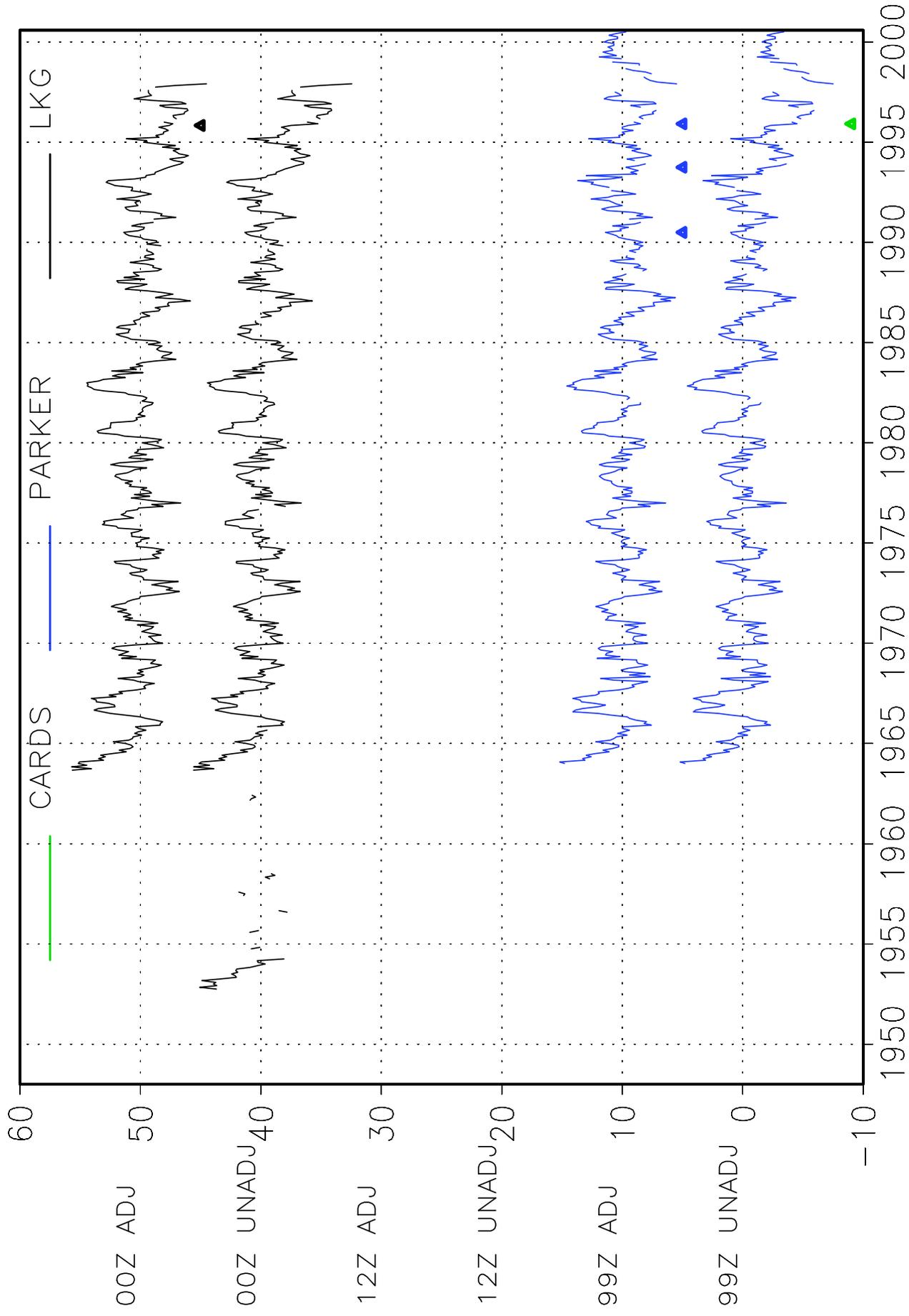
72775 Great Falls 20 mb



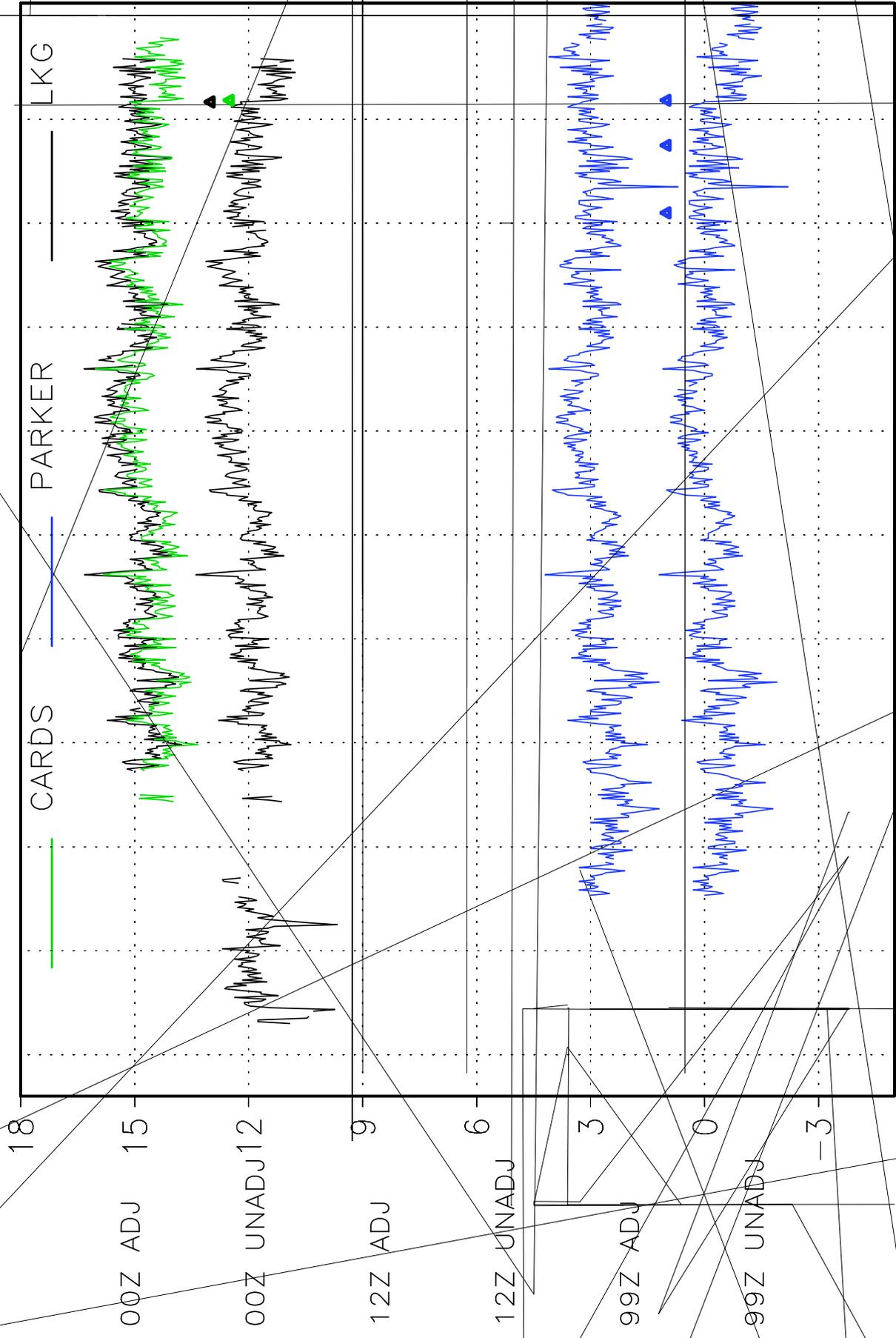
72775 Great Falls 300 mb



91334 Truk 50 mb

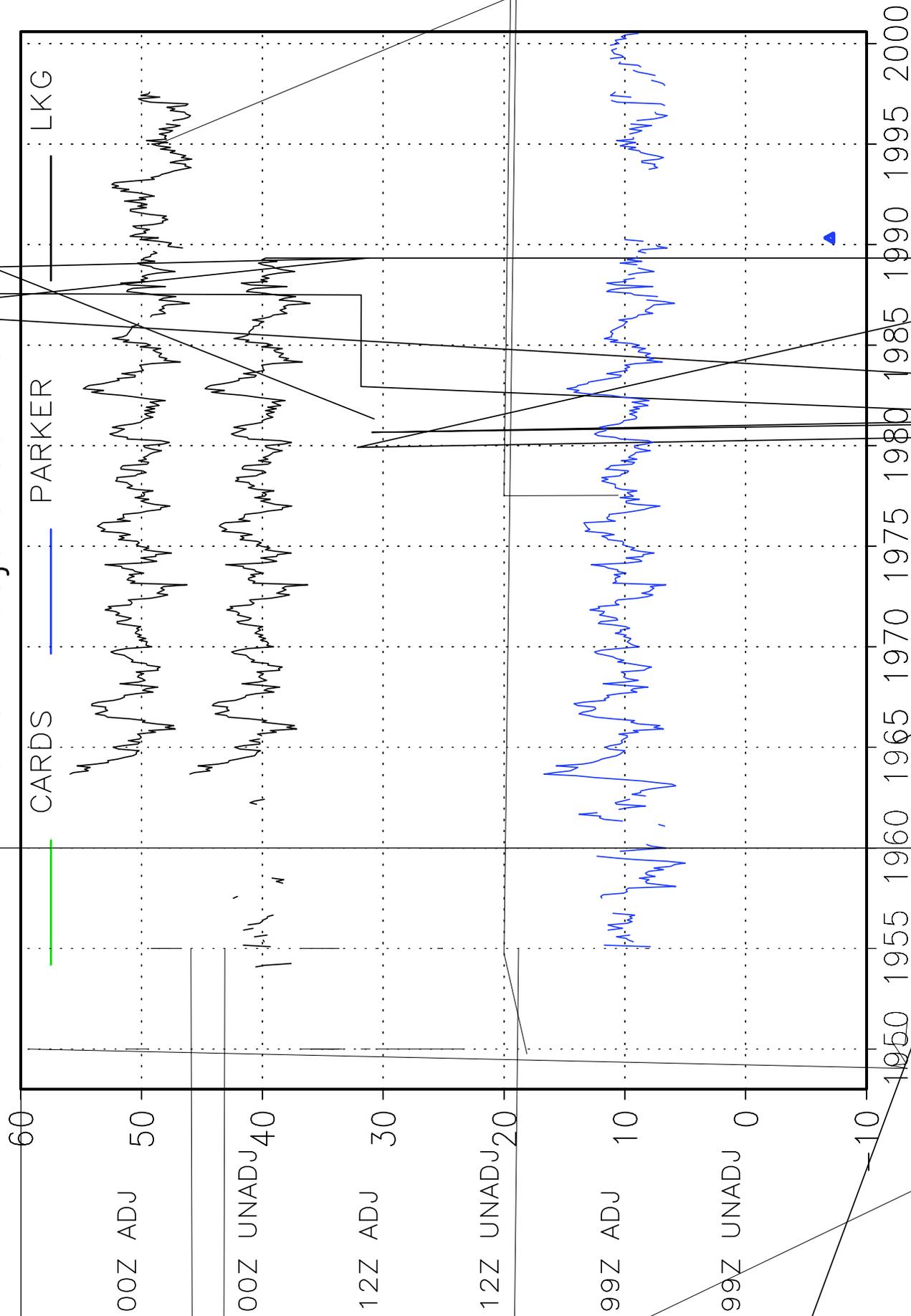


91334 Truk 500 mb

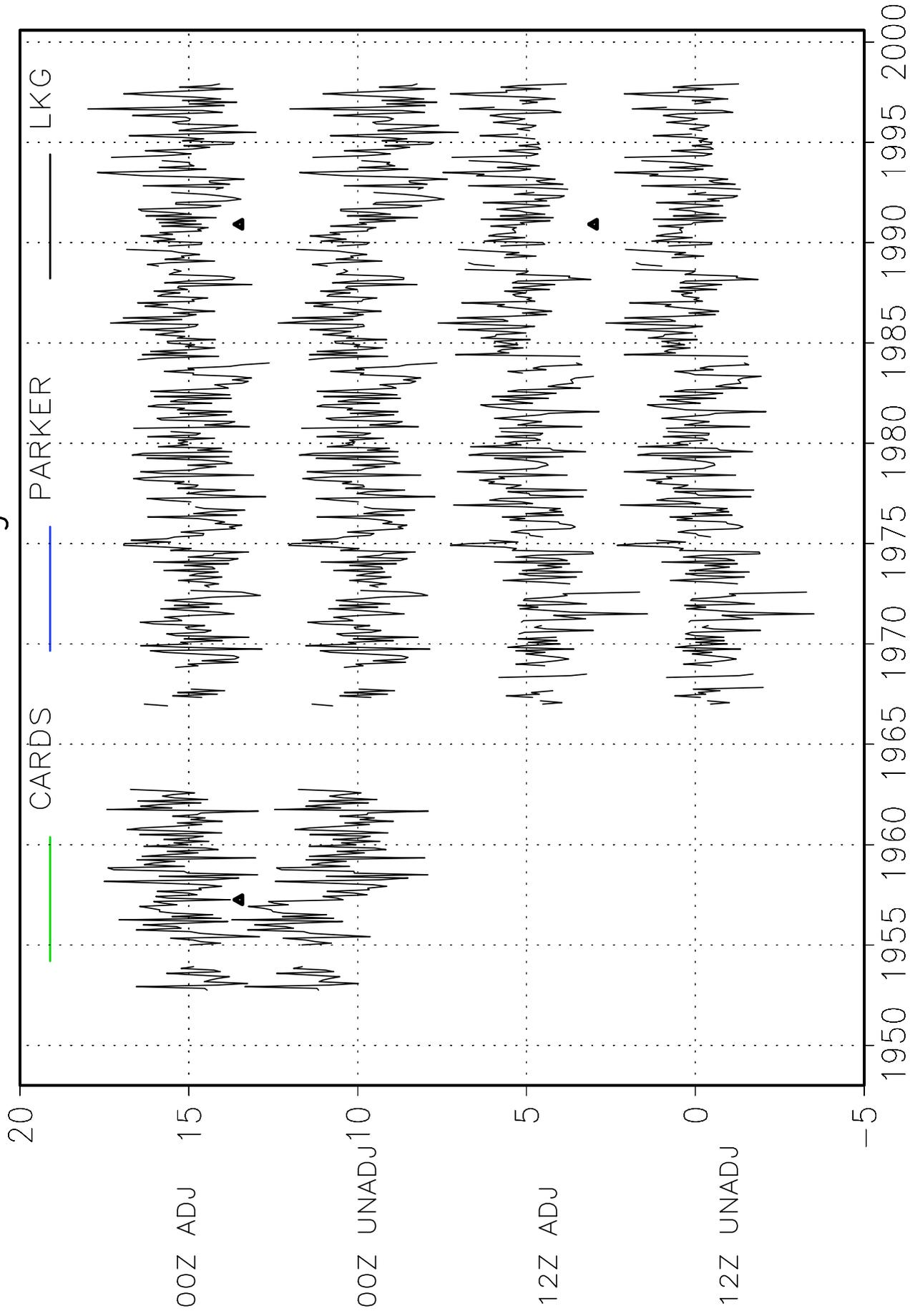


1950 1955 1960 1965 1970 1975 1980 1985 1990 1995 2000

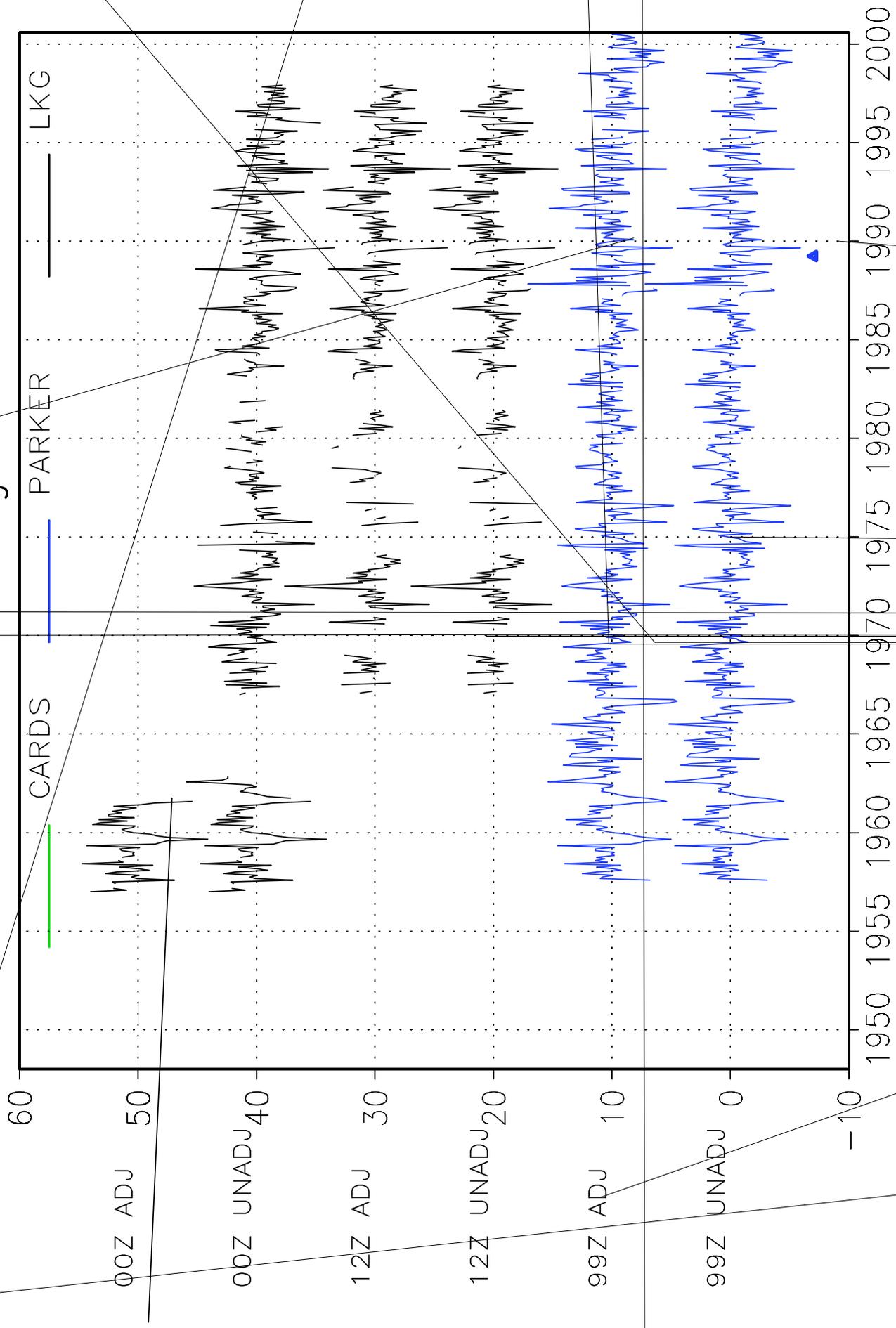
91376 Majuro 50 mb



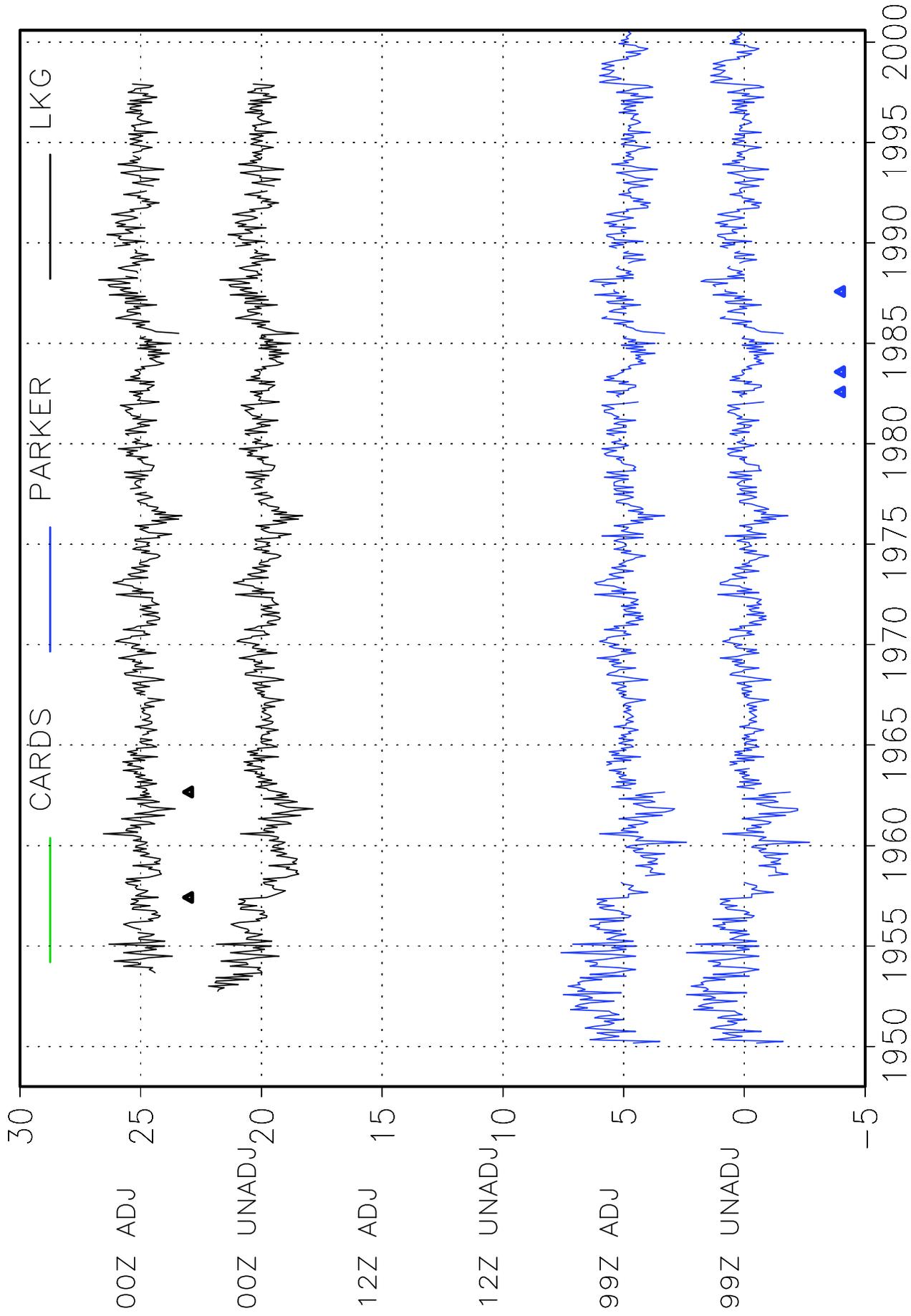
93844 Invercargill 1000 mb



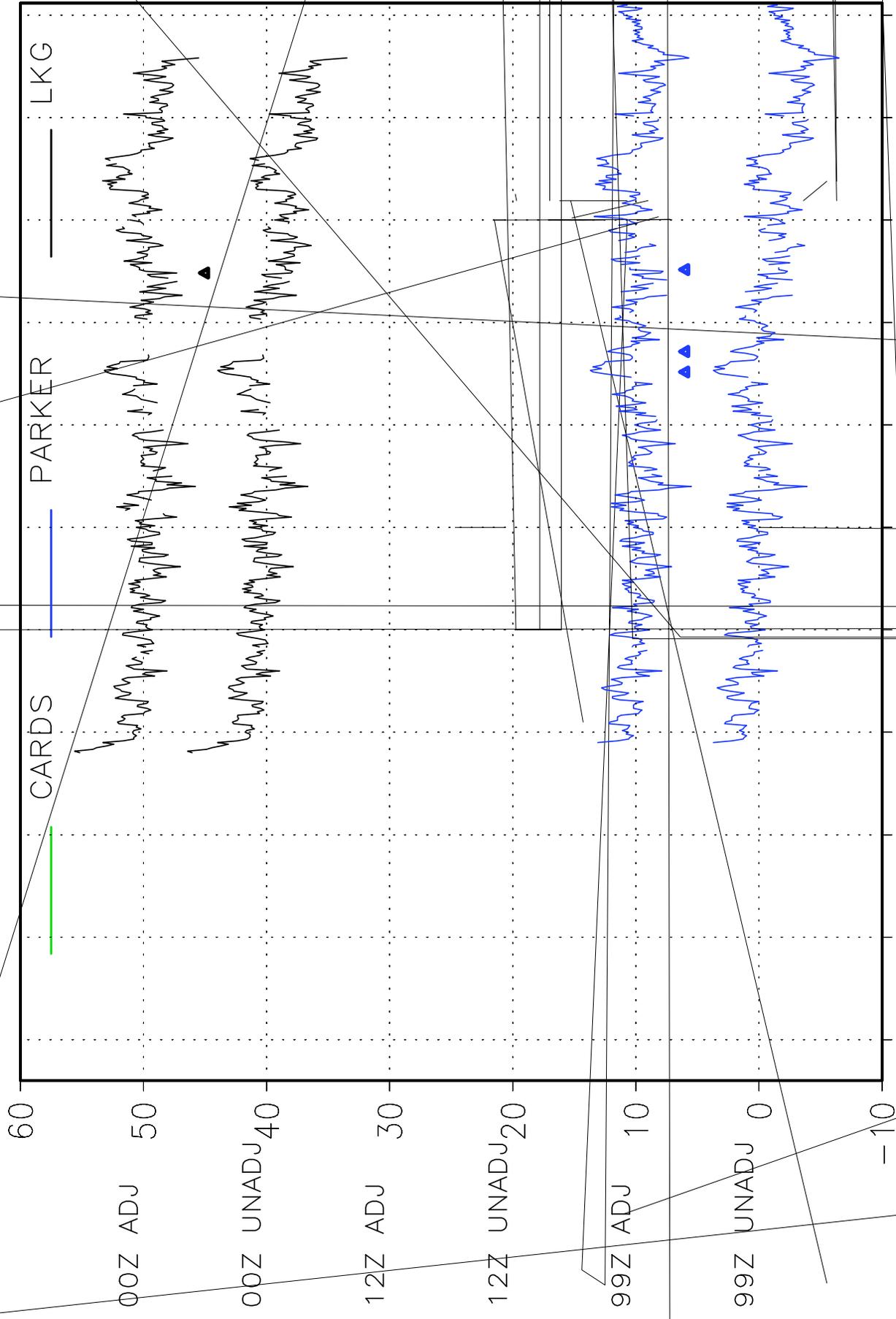
93844 Invercargill 50 mb



94210 Darwin 200 mb



94120 Darwin 50 mb



94672 Adelaide 200 mb

